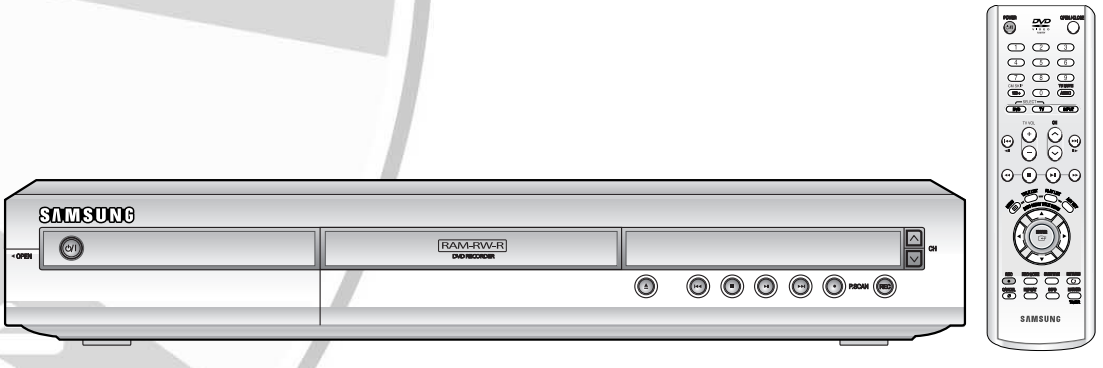
SAMSUNG

Instruction Manual

DVD-R120



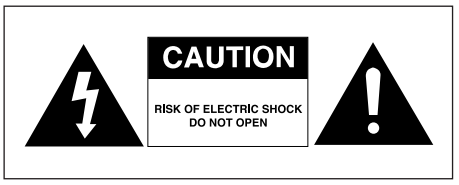
DVD VIDEO RAM/RW DVD VIDEO COMPACT DISC DIGITAL AUDIO

www.samsung.com

AK68-00683A-05

Warning

TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE THE COVER(OR BACK).
NO USER-SERVICEABLE PARTS ARE INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.



This symbol indicates “dangerous voltage” inside the product that presents a risk of electric shock or personal injury.

This symbol indicates important instructions accompanying the product.

Do not install this equipment in a confined space such as a bookcase or similar unit.

WARNING : To prevent damage which may result in fire or electric shock hazard, do not expose this appliance to rain or moisture.

CAUTION : DVD RECORDERS USE AN INVISIBLE LASER BEAM WHICH CAN CAUSE HAZARDOUS RADIATION EXPOSURE IF DIRECTED.
BE SURE TO OPERATE RECORDER CORRECTLY AS INSTRUCTED.

CAUTION

THIS PRODUCT UTILIZES A LASER.
USE OF CONTROLS OR ADJUSTMENTS OR PERFORMANCE OF PROCEDURES OTHER THAN THOSE SPECIFIED HEREIN MAY RESULT IN HAZARDOUS RADIATION EXPOSURE.
DO NOT OPEN COVERS AND DO NOT REPAIR YOURSELF. REFER SERVICING TO QUALIFIED PERSONNEL.

CAUTIONS

Caution: To prevent electric shock, match wide blade of plug to wide slot, fully insert.
Attention: Pour éviter les chocs électriques, introduíre la lame la plus large de la fiche dans la borne correspondante de la prise et pousser jusqu au fond.

This product satisfies FCC regulations when shielded cables and connectors are used to connect the unit to other equipment. To prevent electromagnetic interference with electric appliances, such as radios and televisions, use shielded cables and connectors for connections.

FCC NOTE (for U.S.A):

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

NOTE

- This unit can be used only where the power supply is AC 120V, 60Hz. It cannot be used elsewhere.
- This DVD recorder is designed and manufactured to respond to the Region Management Information.
  If the Region number of a DVD disc does not correspond to the Region number of this DVD recorder, the DVD recorder cannot play the disc.
- This device is protected by U.S. Patent Nos.4,631,603;4,577,216;4,819,098;4,907,093; and 6,516,132.This product incorporates copyright protection technology that is protected by U.S. patents and other intellectual property rights.Use of this copyright protection technology must be authorized by Macrovision,and is intended for home and other limited viewing uses only unless otherwise authorized by Macrovision.Reverse engineering or disassembly is prohibited.

DANGER	– VISIBLE AND INVISIBLE LASER RADIATION WHEN OPEN. AVOID DIRECT EXPOSURE TO BEAM.
CAUTION	– VISIBLE AND INVISIBLE LASER RADIATION WHEN OPEN. AVOID EXPOSURE TO BEAM.
ATTENTION	– RAYONNEMENT LASER VISIBLE ET INVISIBLE EN CAS D'OUVERTURE. EXPOSITION DANGEREUSE AU FAISCEAU.
ADVARSEL	– SYNLIG OG USYNLIG LASERSTRÅLING VED ÅBNING. UNDGÅ UDSÆTTELSE FOR STRÅLING.
VARO !	– AVATTAESSA OLET ALTTIINA NÄKYVÄÄ JA NÄKYMÄTÖN LASERSÄTEILYLLE. ÄLÄ KATSO SÄTEESEEN.
VARNING	– SYNLIG OCH OSYNLIG LASERSTRÅLNING NÄR DENNA DEL ÄR ÖPPNAD. BETRAKTA EJ STRÅLEN.
ADVARSEL	– SYNLIG OG USYNLIG LASERSTRÅLING NÅR DEKSEL ÅPNES. UNNGÅ EKSPONERING FOR STRÅLEN.
VORSICHT	– SICHTBARE UND UNSICHTBARE LASERSTRAHLUNG, WENN ABDECKUNG GEÖFFNET. NICHT DEM STRAHL AUSSETZEN.
注意	– 打开时有可见及不可见激光辐射。避免激光束照射。
注意	– ここを開くと可視及び不可視のレーザー光が出ます。ビームを直接見たり、触れたりしないでください。

Precaution

Important Safety Instructions

Read these operating instructions carefully before using the unit. Follow all the safety instructions listed below. Keep these operating instructions handy for future reference.

1) Read these instructions.
2) Keep these instructions.
3) Heed all warnings.
4) Follow all instructions.
5) Do not use this apparatus near water.
6) Clean only with dry cloth.
7) Do not block any ventilation openings, Install in accordance with the manufacturer's instructions.
8) Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
9) Do not defeat the safety purpose of the polarized or grounding- type plug. A polarized plug has two blades with one wider than the other. A grounding-type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. if the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
10) Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
11) Only use attachments/accessories specified by the manufacturer.
12) Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.
13) Unplug this apparatus during lightning storms or when unused for long periods of time.
14) Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.

Handling Cautions

- Before connecting other components to this recorder, be sure to turn them all off.
- Do not move the recorder while a disc is being played, or the disc may be scratched or broken, and the recorder's internal parts may be damaged.
- Do not put a flower vase filled with water or any small metal objects on the recorder.
- Be careful not to put your hand into the disc tray.
- Do not place anything other than the disc in the disc tray.
- Exterior interference such as lightning and static electricity can affect normal operation of this recorder. If this occurs, turn the recorder off and on again with the POWER button, or disconnect and then reconnect the AC power cord to the AC power outlet. The recorder will operate normally.
- Be sure to remove the disc and turn off the recorder after use.
- Disconnect the AC power cord from the AC outlet when you don't intend to use the recorder for long periods of time.
- Clean the disc by wiping in a straight line from the inside to the outside of the disc.

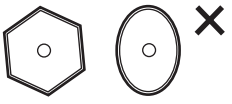
Maintenance of Cabinet

For safety reasons, be sure to disconnect the AC power cord from the AC outlet.

- Do not use benzene, thinner, or other solvents for cleaning.
- Wipe the cabinet with a soft cloth.

Disc Handling

- Use discs with regular shapes. If an irregular disc (a disc with a special shape) is used, this DVD recorder may be damaged.



Holding discs

- Avoid touching the surface of a disc where recording is performed.

DVD-RAM, DVD-RW and DVD-R

- Clean with an optional DVD-RAM/PD disc cleaner (LF-K200DCA1 where available).Do not use cleaners or cloths for CDs to clean DVD-RAM/DVD-RW/DVD-R discs.

DVD-Video, CD

- Wipe off dirt or contamination on the disc with a soft cloth.

Cautions on handling discs

- Do not write on the printed side with a ball-point pen or pencil.
- Do not use record cleaning sprays or antistatic. Also, do not use volatile chemicals, such as benzene or thinner.
- Do not apply labels or stickers to discs. (Do not use discs fixed with exposed tape adhesive or leftover peeled-off stickers.)
- Do not use scratch-proof protectors or covers.
- Do not use discs printed with label printers available on the market.
- Do not load warped or cracked discs.

Disc Storage

Be careful not to harm the disc because the data on these discs is highly vulnerable to the environment.

- Do not keep under direct sunlight.
- Keep in a cool ventilated area.
- Store vertically.
- Keep in a clean protection jacket.
- If you move your DVD recorder suddenly from a cold place to a warm place, condensation may generate on the operating parts and lens and cause abnormal disc playback. If this occurs, do not connect the plug to the power outlet. After two hours, insert the disc and try to play back again.

Disc Specifications

DVD-Video

- A digital versatile disc (DVD) can contain up to 135-minutes of images, 8-language audio and 32 subtitle languages. It is equipped with MPEG-2 picture compression and Dolby 3D surrounding, allowing you to enjoy vivid and clear theater quality images in the comfort of your own home.
- When switching from the first layer to the second layer of a double-layered DVD Video disc, there may be momentary distortion in the image and sound. This is not a malfunction of the unit.
- Once a DVD-R/RW recorded in Video Mode is finalized, it becomes DVD-Video.

Audio CD

- An audio disc on which 44.1kHz PCM Audio is recorded
- Plays CD-DA format audio CD-R and CD-RW discs. The unit may not be able to play some CD-R or CD-RW discs due to the condition of the recording.

CD-R/RW

MP3 CD-R/RW

- Only CD-R discs with MP3 files recorded with ISO9660 or JOLIET format can be played back
- Only MP3 files with the ".mp3", ".MP3" extension can be used.
- For MP3 files recorded with a VBR(Variable Bit Rates), from 32 Kbps to 320 Kbps, the sound may cut in out.
- Playable bitrate range is from 56Kbps to 320Kbps.
- The unit can handle a maximum of 1000 files and folders.

JPEG CD-R/RW

- Only JPEG files with the ".jpg", ".JPG" extension can be used.
- The unit can handle a maximum of 1000 files and folders.
- Maximum size of progressive JPEG is 3M pixels.
- MOTION JPEG is not supported.

Using CD-R/RW

- Use a 700MB(80 minutes) CD-R/RW disc.
  If possible, do not use a 800MB(90 minutes) or above disc, as the disc may not play back.
- If the CD-R/RW disc was not recorded as a closed session, you may experience a delay in the early playback time, and all recorded files may not play.
- Some CD-R/RW discs may not be playable with this unit, depending on the device which was used to burn them.
  For contents recorded on CD-R/RW media from CDs for your personal use, playability may vary depending on contents and discs.

DVD-R Disc Playback and Recording

- Once a DVD-R recorded in Video Mode is finalized, it becomes DVD-Video.
- You can record onto the available space on the disc and perform editing functions such as giving titles to discs and programs and erasing programs before finalizing.
- When programming is erased from a DVD-R, that space does not become available. Once an area on a DVD-R is recorded on, that area is no longer available for recording, whether the recording is erased or not.
- It takes about 30 seconds for the unit to complete recording management information after recording finishes.
- This product optimizes the DVD-R for each recording. Optimizing is carried out when you start recording after inserting the disc or turning on the unit. Recording onto the disc may become impossible if optimizing is carried out too many times.
- Playback may be impossible in some cases due to the condition of recording.
- This unit can play back DVD-R discs recorded and finalized with a Samsung DVD video recorder. It may not be able to play some DVD-R discs depending on the disc and the condition of the recording.

DVD-RW Disc Playback and Recording

- Recording and playback can be performed on DVD-RW discs in both the Video and VR Modes.
- Once a DVD-RW recorded in VR Mode or Video mode is finalized, you cannot perform addtional recording.
- Once a DVD-RW recorded in Video Mode is finalized, it becomes DVD-Video.
- In both modes, playback can be performed before and after finalization, but additional recording, deleting and editing can not be performed after finalization.
- If you want to record the disc in VR Mode and then record in V Mode, be sure to execute Format.
  Be careful when executing Format because all the recorded data may be lost.
- A DVD-RW blank disc is initialized to VR Mode when first initialized.

- **DVD-RW (VR mode)**
  - This is a format that is used for recording data on a DVD-RAM or DVD-RW disc. You can record multiple titles, edit, delete, partial delete, create a playlist, etc.
  - A disc that is recorded in this mode may not be played by an existing DVD player.

- **DVD-RW (Video mode)**
  - This is a format that is used for recording data on a DVD-RW or DVD-R disc. The disc can be played by an existing DVD player once it has been finalized.
  - If a disc that has been recorded in Video Mode by a different maker's recorder but has not been finalized, it cannot be played or additionally be recorded by this recorder.

DVD-RAM Disc Playback and Recording

- DVD-RAM discs come with or without a cartridge. For this product, we recommend DVD-RAM discs that come without cartridges.
- Ensure that the recording mode is set to VR mode. Otherwise, this product will not be able to play the recording.
- You cannot play a DVD-RAM in most DVD players due to compatibility issues.
- Only DVD-RAM standard Version 2.0. discs can be played in this unit.
- DVD-RAM recorded on this unit may not work with other DVD players. To determine compatibility with these DVD-RAM discs, refer to the user's manual for the player.
- For cartridge type DVD-RAM discs, remove the cartridge and use the disc only.

Protection

COPY PROTECTION

- Many DVD discs are encoded with copy protection. Because of this, you should only connect your DVD recorder directly to your TV, not to a VCR. Connecting to a VCR results in a distorted picture from copy-protected DVD discs.
- This product incorporates copyright protection technology that is protected by methods claims of certain U.S. patents and other intellectual property rights owned by Macrovision Corporation and other rights owners. Use of this copyright protection technology must be authorized by Macrovision Corporation, and is intended for home and other limited viewing uses only unless otherwise authorized by Macrovision Corporation. Reverse engineering or disassembly is prohibited.

This DVD Recorder can allow you to protect the contents of your discs,
as described below.

- Program-protected: See page 74 "Locking a Title"
- Disc-protected: See page 86 "Disc Protection"

* DVD-RAM/DVD-RW/DVD-R discs that are incompatible with the DVD-VIDEO format cannot be played with this product.
* For more information on DVD recording compatibility, consult your DVD-RAM/DVD-RW/DVD-R manufacturer.
* If poor quality DVD-RAM/DVD-RW/DVD-R discs are used, your recordings may fail.

Do not use the following discs!

- LD, CD-G, CD-I, CD-ROM and DVD-ROM discs should not be used in this product.

[Note]
Disc types that can be played :
CD/CD-R/CD-RW/MP3/JPEG/DVD-Video/DVD-RAM/DVD-RW/ DVD-R.
DVD +R/+RW cannot record, but the finalized DVD +R/+RW can be played.
For a DVD-R/DVD-RW disc, which has been recorded in Video Mode on another component, it can play only when finalized.

- Some commercial discs and DVD discs purchased outside your region may not be playable with this product. When these discs are played, either "No disc." or "Please check the regional code." will be displayed.
- If your DVD-RW disc is an illegal copy or is not in DVD video format, it may also not be playable.

Disc compatibility

- High Speed Recording discs can be used in this unit.
- Not all brands of discs will be compatible with this unit.
- The latest firmware upgrade to improve recording & playback quality can be downloaded from our web site. (Download Center at www.samsung.com)
- If disc compatibility problems continue, or there is an issue upgrading your recorder, contact the Call Center at 1-800-SAMSUNG.

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General Features

The DVD-R120 allows you to record and play high quality digital video on DVD-RAM/DVD-RW/DVD-R discs. You can record and edit digital video on DVD-RAM/ DVD-RW/DVD-R discs as if they were VCR tapes.

High quality digital audio and video recording and playback

Record up to 16-hours of video with a double sided 9.4 GB DVD-RAM disc, and up to 8-hours of images with a 4.7 GB DVD-RAM/DVD-RW/DVD-R disc, depending on the recording mode.

Selectable Recording Mode

You can set your recorder to one of five different recording speeds, each varying in recording quality and length. EP mode yields the most recording time, LP & SP modes provide less recording time with higher quality recording, and XP mode gives you the highest quality recording. There's also the FR (Flexible Recording) mode that lets you record with the best picture quality possible for the recording time and remaining space on the disc in timer recording.

Automated Quality Adjustment for Timer Recording

If FR mode is selected, the video quality is adjusted automatically so that all video for the scheduled time can be recorded onto the free disc space. (See page 44.)

Creating a DVD video title using DVD-RW/DVD-R disc

With a DVD-R120, create your own DVD video title on 4.7 GB DVD-RW/DVD-R discs.

Copying data from a digital camcorder using a DV input jack

Record digital camcorder video onto DVD-RAM or DVD-RW, DVD-R discs using the DV input jack (IEEE 1394-4pin). (See pages 41.)

High quality progressive scan

Progressive scanning provides high resolution and flicker free video.
The 10-bit 54-MHz DAC and 2D Y/C Separating Circuitry provides the highest video playback and recording quality. (See page 20.)

A variety of functions with an easy-to-use user interface

The integrated menu system and the messaging function allow you to perform desired operations both easily and conveniently. With a DVD-RAM or DVD-RW disc, you can edit recorded images, create a playlist, and edit video in a specific sequence according to your requirements.

Before reading the user's manual

Make sure to check the following matters before reading the user's manual.

Icons that will be used in manual

Icon	Term	Definition
DVD-VIDEO	DVD	This involves a function available in DVD or DVD-R/DVD-RW discs that have been recorded and finalized in Video Mode.
DVD-RAM	RAM	This involves a function available in DVD-RAM.
DVD-RW	RW	This involves a function available in DVD-RW.
DVD-R	R	This involves a function available in DVD-R.
CD	CD	This involves a function available in a data CD (CD-R or CD-RW).
JPEG	JPEG	This involves a function available in a data picture CD (CD-R or CD-RW).
MP3	MP3	This involves a function available in a data CD (CD-R or CD-RW on which MP3 is recorded).
!	Caution	This involves a case where a function does not operate or settings may be cancelled.
✎	NOTE	This involves tips or instructions on the page that help each function operate.
	One-Touch button	A function that can be operated by using only one button.
ANYKEY	ANYKEY button	A function that can be operated by using Any Key button.

About the use of this user's manual

1) Be sure to be familiar with Safety Instructions before using this product. (See pages 2~3)
2) If a problem occurs, check for Troubleshooting. (See pages 90~93)

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How to use the DVD recorder

Step 1 Select the disc type

This unit can record on the following types of discs.
If you want to repeatedly record on the same disc or you want to edit the disc after recording, select a rewritable DVD-RW or DVD-RAM type disc.
If you want to save recording without any change, choose a non-rewritable DVD-R.

Step 2 Format the disc to start recording

Unlike a VCR, the recorder automatically starts formatting when an unused disc is inserted. This is required for the preparation of recording on a disc.

Using a DVD-RAM
This type of disc can be formatted in DVD-Video Recording format (VR mode). You can edit recorded image and create a playlist and edit images in a specific sequence according to your requirements.

Using a DVD-RW
This type of disc can be formatted in either DVD-Video format (Video mode) or DVD-Video Recording format (VR mode). For an unused disc, a message that asks whether to initialize in VR Mode or not is displayed. You can play a Video mode disc on various DVD components. A VR mode disc allows more varied editing.

Using a DVD-R
This type of disc can be formatted in DVD Video format. After formatting is complete, you can record on the disc. You can play this type of discs on various DVD components only when they have been finalized.

NOTE

- You can only use either the VR or Video mode on a DVD-RW, but not both at the same time.
- You can change the DVD-RW format to another format by reinitializing. It should be noted that the disc's data will be lost when changing formats.

Step 3 Recording

There are two different recording methods, Direct Recording and Timer Recording. Timer recording is classified as a Date : Once(mm/dd), Every Day, MON-SAT, Every SAT, etc. as a recording mode : XP (high quality mode), SP (standard quality mode), LP (long recording mode), and EP (extended mode) according to the recording mode. When recording is set in the FR mode, the best quality picture is recorded with regards to the remaining time on the disc.

Step 4 Playing

You can select the title you want to play in a displayed menu and then immediately start playback.
A DVD consists of sections called titles, and sub sections called chapters.
During recording, a title is created between two points where you start and stop recording. Chapters will be created automatically when you finalize recording on DVD-R / DVD-RW discs in Video mode. The chapter's length (interval between chapters) varies according to the recording mode.

Step 5 Editing a recorded disc

Editing on discs is easier than conventional video tapes. The recorder supports many different edit functions, possible only with DVDs.
With a simple and easy edit menu, you can operate various edit functions, such as delete, copy, rename, lock, etc., on a recorded title.

Creating a playlist (DVD-RAM/-RW in VR mode)
With this recorder, you can create a new playlist on the same disc and edit it without the change of the original recording.

Step 6 Finalizing & Playing on other DVD components

To play your DVD on other DVD components, finalizing may be necessary. First, finish all editing and recording operations, then finalize the disc.

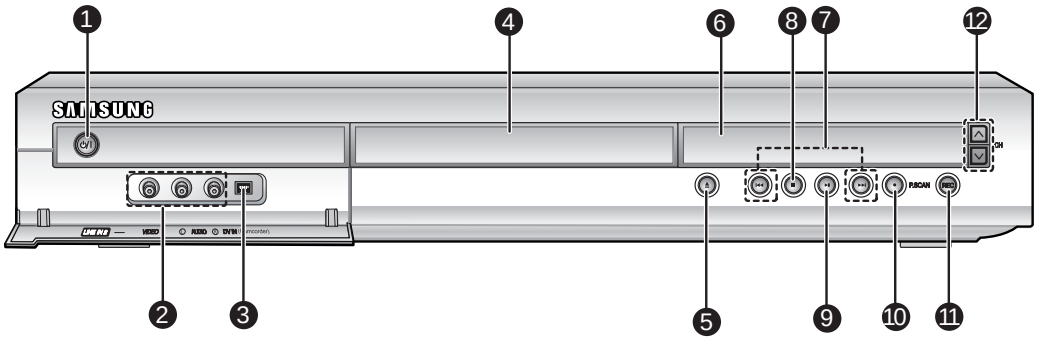
When using a DVD-RW disc in VR Mode
Although finalizing is generally unnecessary when playing the disc on a VR Mode compatible component, a finalized disc should be used for playback.

When using a DVD-RW disc in Video Mode
The disc should be finalized first to enable playback on anything other than this recorder. No more editing or recording can be made on the disc once it has been finalized.

When using a DVD-R disc
You should finalize the disc to play it on a component other than this recorder. You cannot edit or record on the disc once it has been finalized.

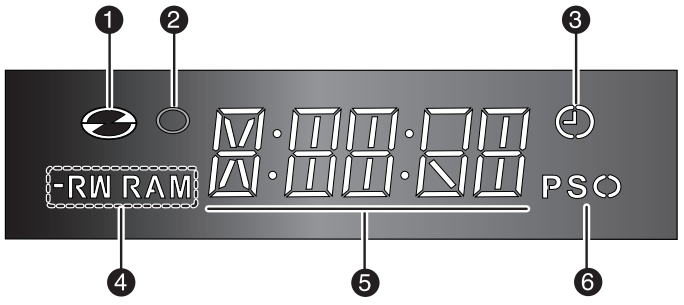
Description

Front panel



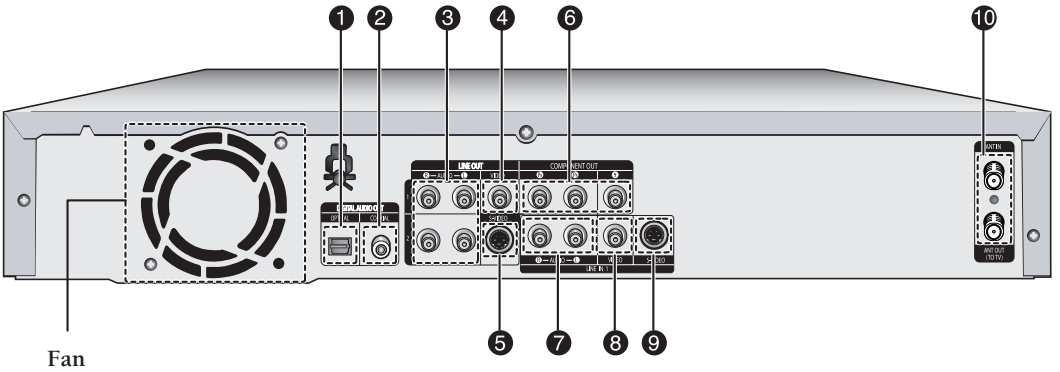
1. **POWER**
   Turns the recorder on and off.
2. **LINE 2 IN**
   Connect external equipment.
3. **DV-IN**
   Connect external digital equipment with a DV jack. (such as a camcorder)
4. **DISC TRAY**
   Opens to accept a disc.
5. **OPEN/CLOSE**
   Opens and closes the disc tray.
6. **DISPLAY**
   Displays the playing status, time, etc.
7. **SEARCH**
   Goes to the next title/chapter/track, or goes back to the previous title/chapter/track.
8. **STOP**
   Stops disc playback.
9. **PLAY/PAUSE**
   Plays a disc or pauses playback.
10. **P.SCAN**
    Selects the progressive scan.
11. **REC**
    Starts recording.
12. **CH (∨∧)**
    Selects TV channels.

Front Panel Display



1. Lights when a disc is loaded.
2. Lights in the record mode.
3. Lights to indicate the timer record mode.
4. Lights when a -R/RW/RAM disc is loaded.
5. Displays the messages.
6. Lights in the progressive scan mode.

Rear Panel



Fan
The fan always revolves when the power is on.
Ensure a minimum of 4″ clear space on all sides of the fan when installing the product.

1. **DIGITAL AUDIO OUT(OPTICAL)**
   Connects to an amplifier having a digital optical audio input jack.
2. **DIGITAL AUDIO OUT(COAXIAL)**
   Connects to an amplifier having a digital coaxial audio input jack.
3. **LINE AUDIO OUT**
   Connects to the audio input of external equipment using audio cables.
4. **LINE VIDEO OUT(good video quality)**
   Connects the input of external equipment using a Video cable.
5. **LINE S-VIDEO OUT(better video quality)**
   Connects the input of external equipment using an S-Video cable.
6. **COMPONENT VIDEO OUT(best video quality)**
   Connects to equipment having Component video input jacks.
7. **LINE 1 AUDIO IN**
   Connects the output of external equipment using an audio cables
8. **LINE 1 VIDEO IN**
   Connects the output of external equipment using a video cable.
9. **LINE 1 S- VIDEO IN**
   Connects the output of external equipment using an S-Video cable.
10. **ANT IN/ANT OUT (TO TV)**
    Connects antenna cables.

NOTE

- The Antenna connection does not pass audio/video signals. To watch a DVD on your TV, you must connect audio/video cables.

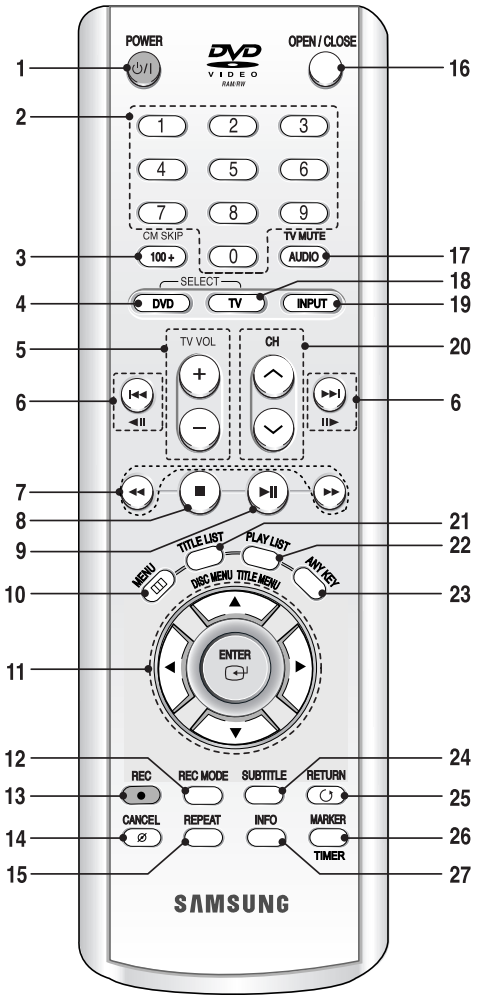
Unpacking

Accessories

Check for the supplied accessories below.

- Video/Audio Cable (AC39-00073A)
- RF Cable for TV (AC39-42001J)
- Remote Control (AK59-00012H)
- Batteries for Remote Control (AAA Size) (AC43-12002H)
- User's Manual (AK68-00683A)
- Quick Guide (AK68-00684A)

Tour of the Remote Control



1. **POWER Button**
2. **Number Buttons**
3. **100+ /CM SKIP Button**
   Press this to select channel 100 or higher.
   When a program recorded on a DVD-RAM, a DVD-RW, a DVD-R or DVD-Video is played, the unit can be set to automatically skip a portion of the program.
4. **DVD Button**
   Press this when you use a DVD.
5. **TV VOL Button**
   TV volume adjustment.
6. **Reverse/Forward Skip Buttons**
   Press to skip a disc backwards or forwards.
   These buttons also function as STEP buttons.
   Each press will play one-frame forward or reverse (see page 50).
7. **Reverse/Forward Search Buttons**
   Press to search a disc backwards or forwards.
8. **Stop Button**
   Press to stop a disc.
9. **Play/Pause Button**
   Press to play/pause a disc.
10. **MENU Button**
    Brings up the DVD recorder's setup menu.
11. **ENTER/DIRECTION Buttons**
    (UP/DOWN or LEFT/RIGHT Buttons)
    This button functions as a toggle switch.
12. **REC MODE Button**
    This will display the recording status.
13. **REC Button**
    Use to make a recording on DVD-RAM/-RW/-R discs.
14. **CANCEL Button**
15. **REPEAT**
    Allows you to repeat a title, chapter, track or disc.
16. **OPEN/CLOSE Button**
    To open and close the disc tray.
17. **AUDIO/TV MUTE Button**
    Use this to access various audio functions on a disc.(DVD mode)
    This operates as Sound Mute. (TV mode)
18. **TV Button**
    Press this to operate TV.
19. **INPUT Button**
    Select line input signal in external input mode (Tuner, Line input or DV INPUT)
20. **CHANNEL Button**
    Use this to select a channel. (DVD, TV mode)
21. **TITLE LIST/DISC MENU Button**
    Use this to enter the View Recording list/Disc menu.
22. **PLAY LIST/TITLE MENU Button**
    Use this to return to the Title menu, or to view the recorded files list.
23. **ANYKEY Button**
    Use this to view the status of the disc that is being played.
24. **SUBTITLE Button**
    Press this to switch the DVD's subtitle language.
25. **RETURN Button**
    Returns to a previous menu.
26. **MARKER Button/TIMER Button**
    Use this to bookmark a position while playing a disc.
    Press to directly enter the Timer Recording Mode menu.
27. **INFO Button**
    This will display current settings or disc status.

Connecting & Setting Up

This section involves various methods of connecting the DVD player to other external components and required initial setting modes.

Quick Overview 14
Step 1 : Connecting the Antenna cable 15
Step 2 : Connecting the Video cable.....18
Step 3 : Connecting the Audio cable 21
Step 4 : Connecting external devices.....24
Step 5 : Connecting the Power cord.....27
Step 6 : Preparing the Remote Control.....27
Step 7 : Initial Setup.....28

Quick Overview

A Quick Overview presented in this guide will give you enough information to start using the recorder.

Step 1 : Connecting the Antenna Cable

▼

Step 2 : Connecting the Video Cable

▼

Step 3 : Connecting the Audio Cable

▼

Step 4 : Connecting external devices

▼

Step 5 : Connecting the Power Cord

▼

Step 6 : Preparing the Remote Control

▼

Step 7 : Initial Setup

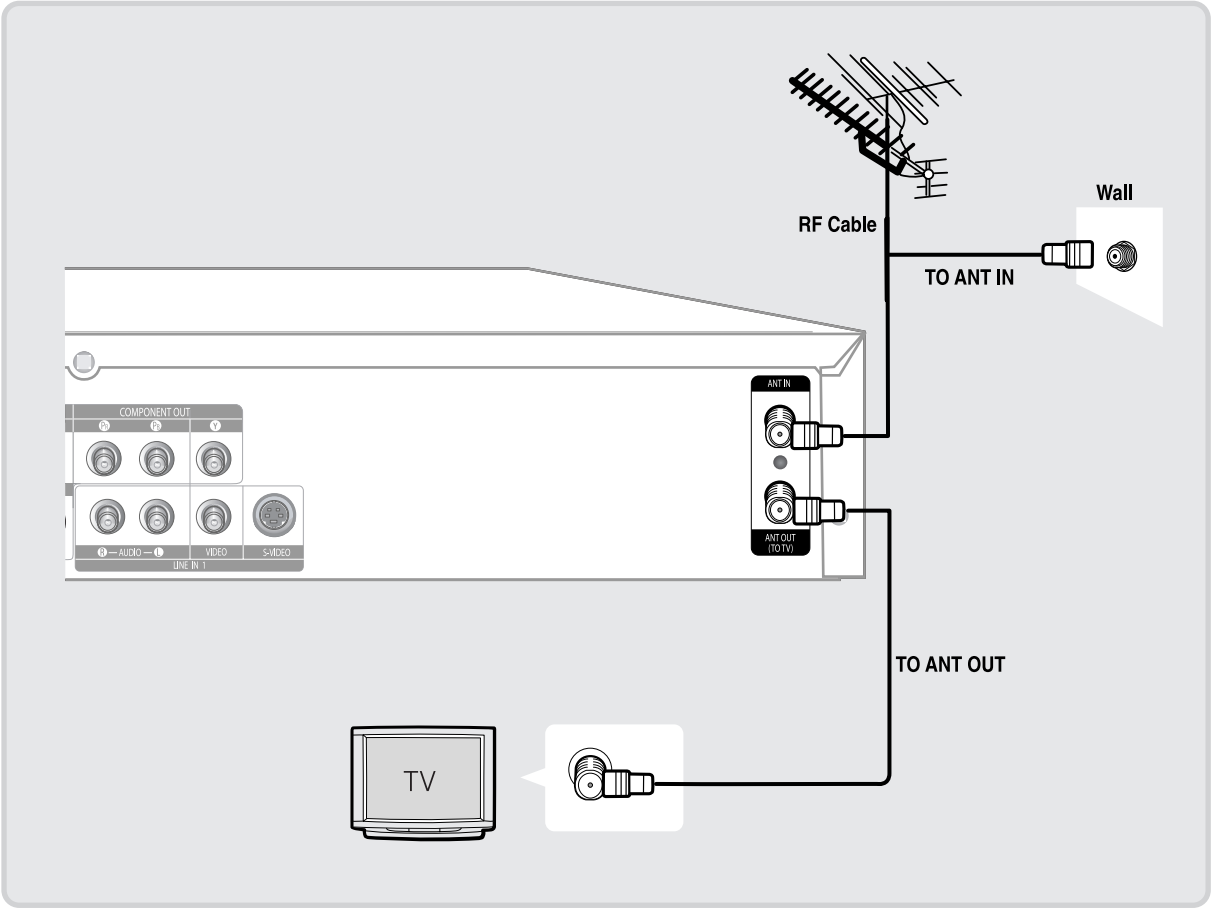
- *Note to CATV system installer:* This reminder is provided to call CATV system installer's attention to Article 820-40 of the National Electrical Code (Section 54 of Canadian Electrical Code, Part I), that provides guidelines for proper grounding and, in particular, specifies that the cable ground shall be connected to the grounding system of the building as close to the point of cable entry as practical.

Step 1: Connecting the Antenna Cable

There are several ways to connect your DVD Recorder. Select one of the Antenna connections on the following pages.

Antenna + DVD Recorder + TV : No Cable box

You can record non-scrambled channels by selecting the channel on the DVD Recorder. Also use this Method if you watch channels without cable box.

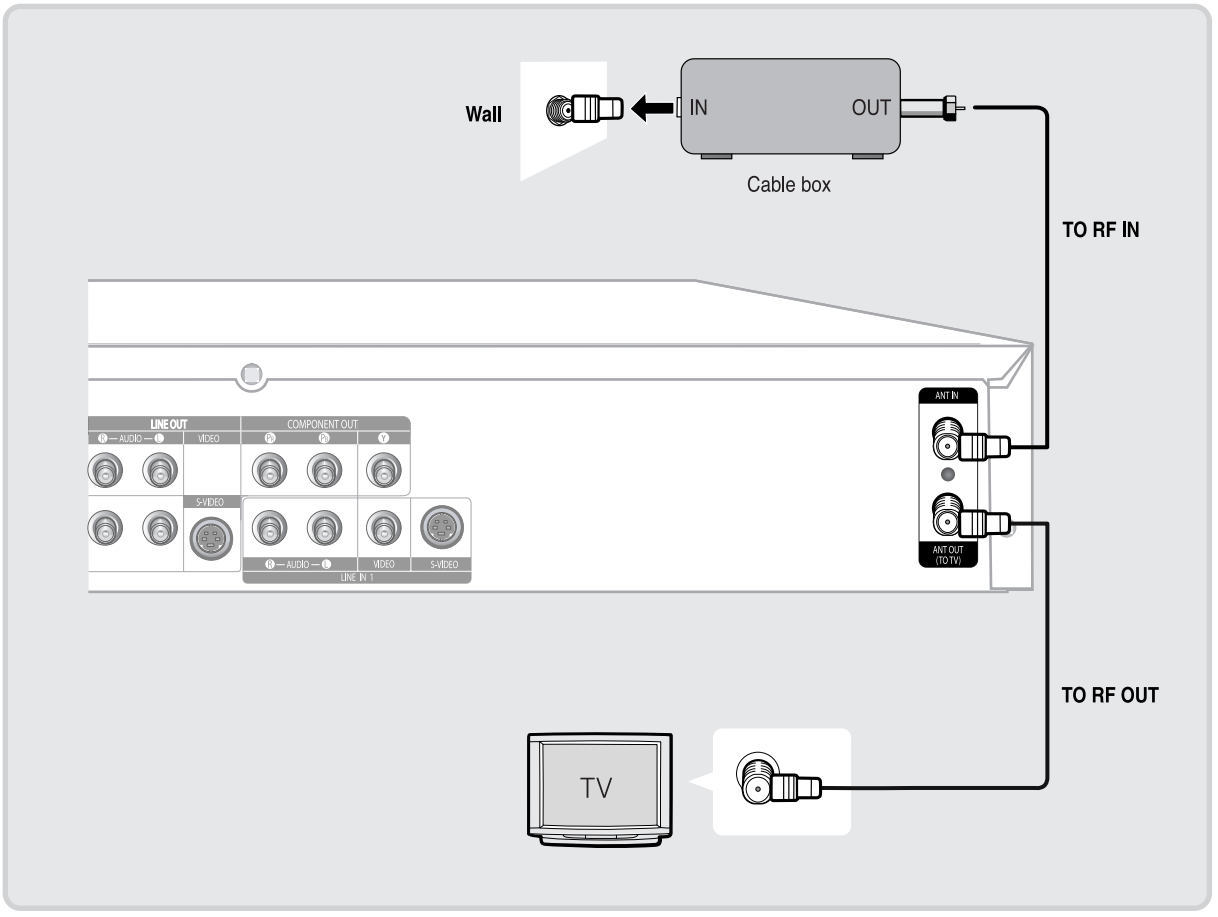


NOTE

- The VHF/UHF RF OUT jack of this product sends only signals received through the antenna. It does not output Audio/ video signals. You must connect audio/video cables to view Video from the unit. (i.e. DVD playback)

Antenna + Cable box + DVD Recorder + TV : Cable box with many scrambled channels

You can record channels by selecting the channel on the cable box. You cannot record one channel while watching another channel. Be sure that the cable box is turned on.

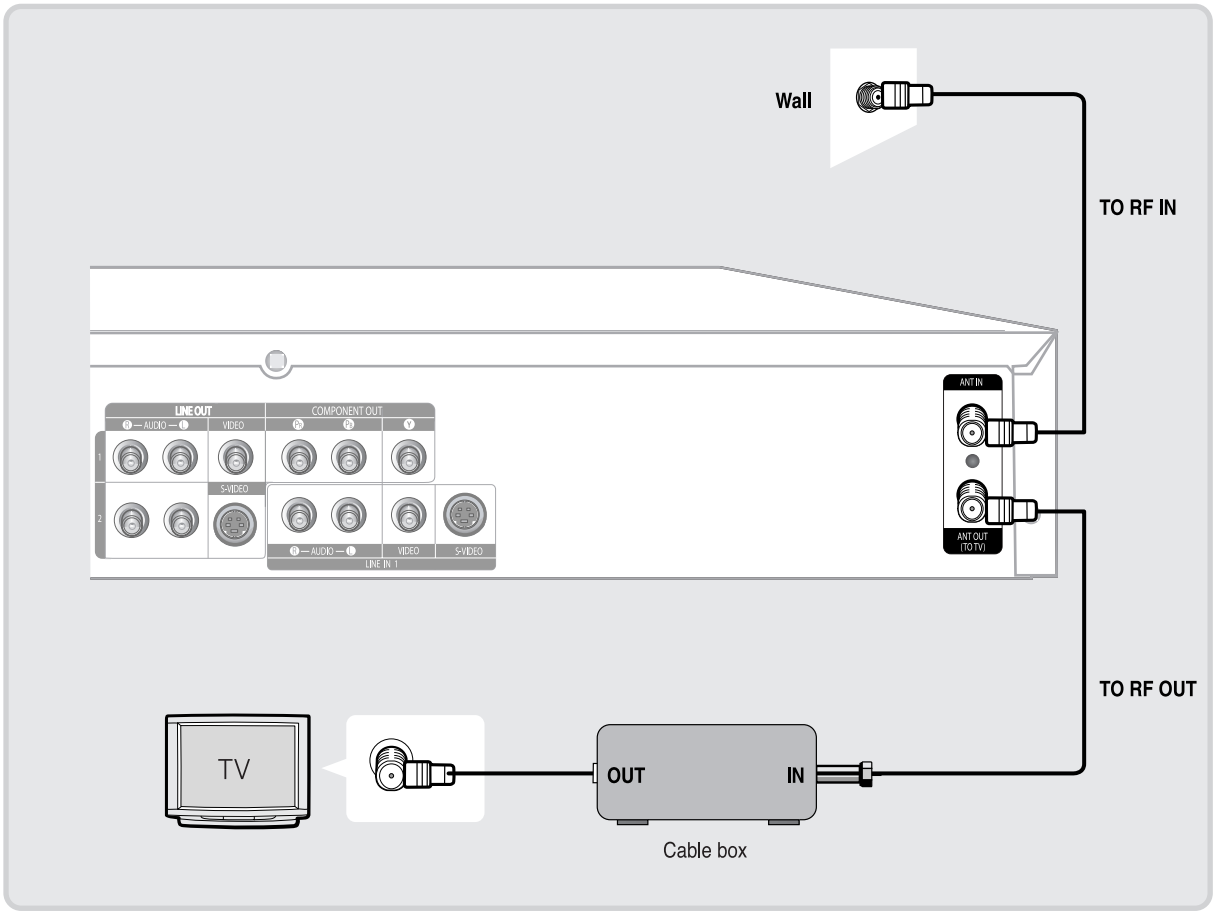


NOTE

- The VHF/UHF RF OUT jack of this product sends only signals received through the antenna. It does not output Audio/ video signals. You must connect audio/video cables to view Video from the unit. (i.e. DVD playback)

Antenna + DVD Recorder + Cable box + TV : Cable box with a few scrambled channels

You can record non-scrambled channels by selecting the channel on the DVD Recorder. You cannot record scrambled channels that require a cable box.



NOTE

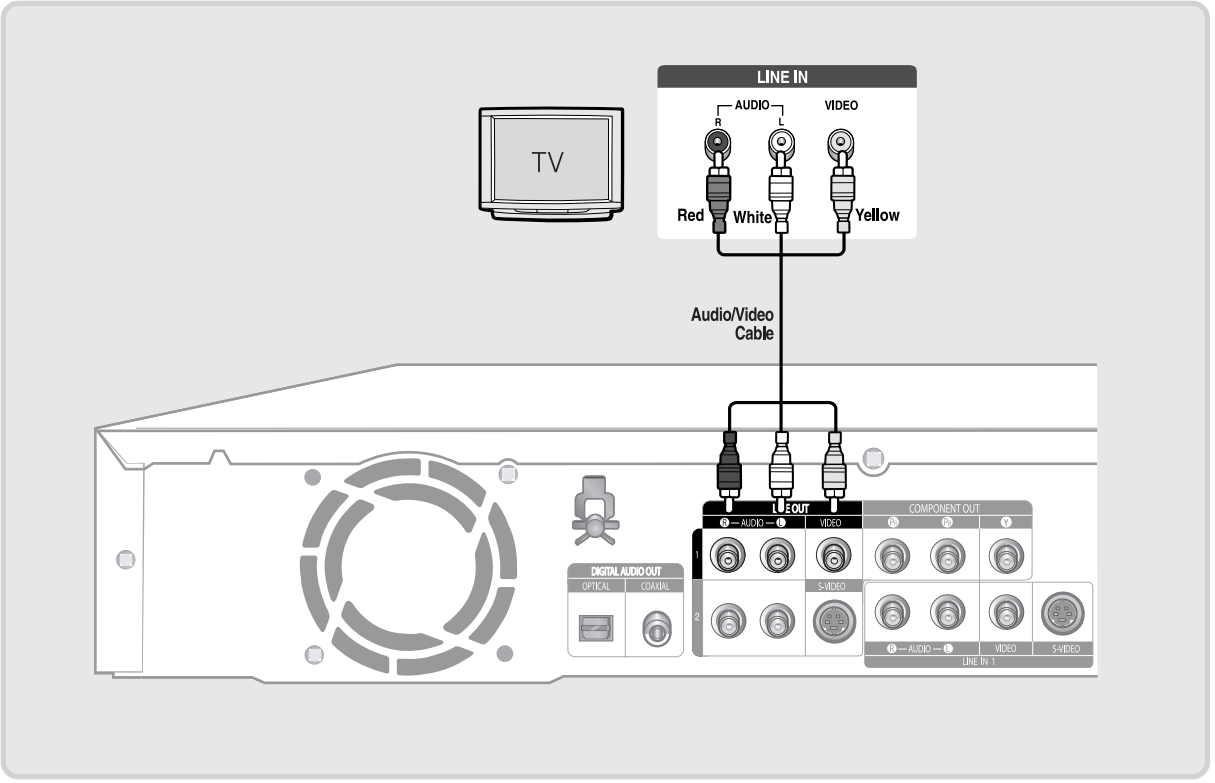
- The VHF/UHF RF OUT jack of this product sends only signals received through the antenna. It does not output Audio/ video signals. You must connect audio/video cables to view Video from the unit. (i.e. DVD playback)

Step 2 : Connecting the Video cable

There are several ways to connect your DVD Recorder. Select one of the video connections on the following pages. The VHF/UHF RF OUT jack of this product sends only signals received through the antenna. It does not output audio/video signals. You must use one of the following audio/video connections on this unit.

Connecting to a Video input jack

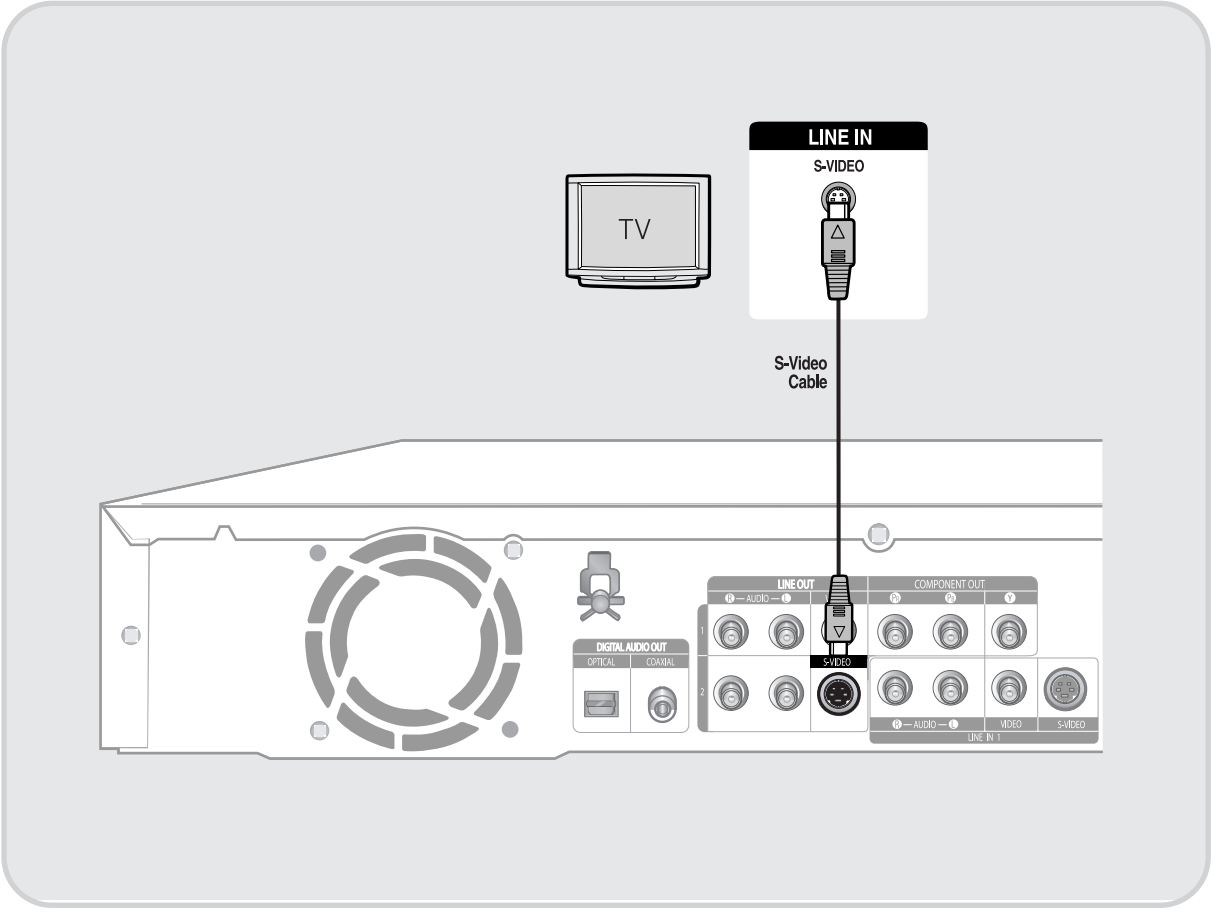
Connect a video(yellow) cable between the VIDEO(yellow) OUT jack on DVD Recorder and VIDEO(yellow) IN jack on the TV (or AV amplifier).



- You will enjoy regular quality images.
- Connect audio cables(white and red) between the AUDIO OUT jacks on the DVD Recorder and AUDIO IN jacks on TV(or AV amplifier).
(See pages 21 ~ 23)

Connecting to an S-Video input jack

Connect an S-Video cable(not supplied) between the S-VIDEO OUT jack on DVD Recorder and S-VIDEO IN jack on your TV (or AV amplifier).

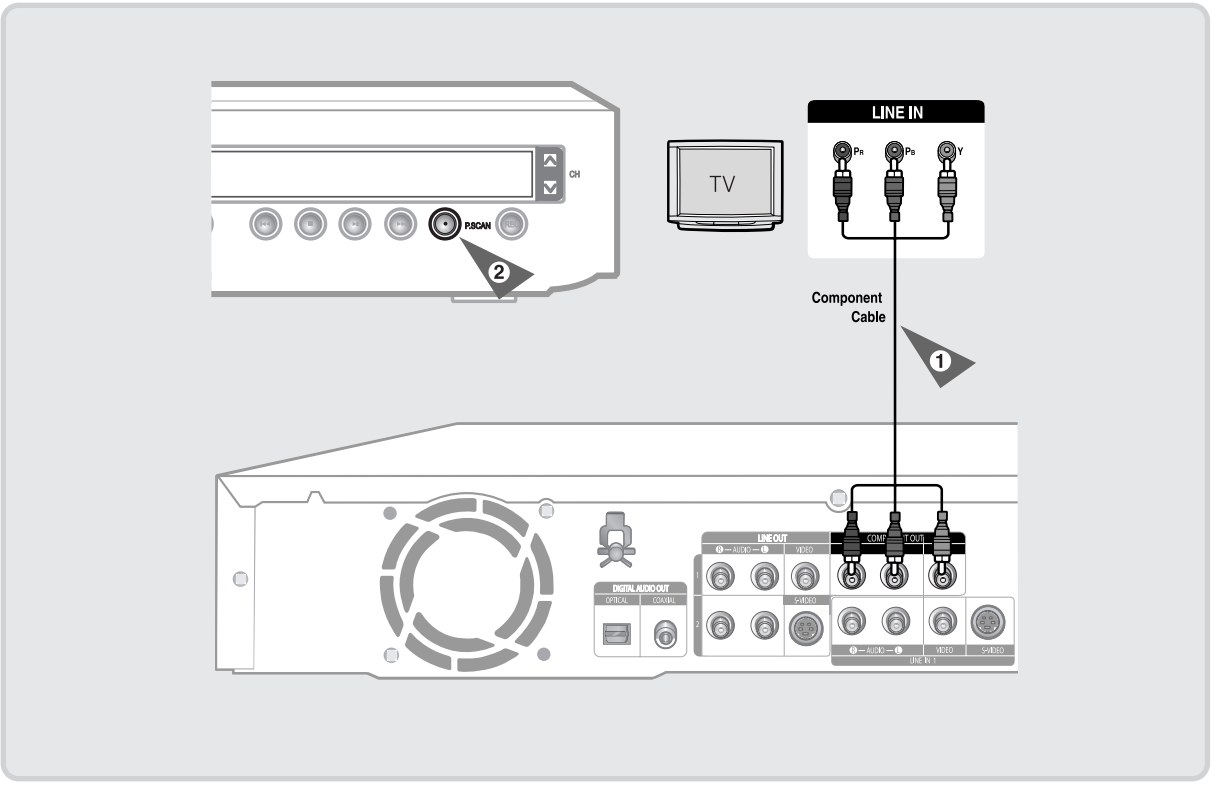


- You will enjoy high quality images. S-Video separates the picture element into black and white (Y) and color (C) signals to present clearer images than regular video input mode.
- Connect audio cables(white and red) between the AUDIO OUT jacks on the DVD Recorder and AUDIO IN jacks on TV(or AV amplifier).
(See pages 21 ~ 23)

NOTE

- S-Video and Component video outputs are available only if your TV supports S-Video input or Component video input, respectively. If S-Video or Component video output does not work, check the TV connections and the TV input selection settings.

Connecting to Component video input jacks(Y,P_B,P_R)



1. Connect Component video cables(not supplied) between the COMPONENT OUT(Y,P_B,P_R) jacks on DVD Recorder and COMPONENT IN(Y,P_B,P_R) jacks on your TV (or AV amplifier).
2. If the TV connected supports Progressive Scan, press the P.SCAN button on the front of the DVD Recorder to enjoy higher quality video.
3. The message "Press [Yes] to confirm Progressive scan mode. Otherwise press [No]" will appear. Press the ◄ ► buttons to select Yes, and then press the ENTER button.
4. The message "Please set your TV to Progressive input, To deactivate, press [STOP] key." will appear. Press the ENTER button.
5. The message "Video Output Mode Progressive Scan" will appear.

- You will enjoy high quality accurate color reproduction images. Component video separates the picture element into black and White(Y), blue(P_B), red(P_R) signals to present clear and clean images.
- Connect audio cables(white and red) between the AUDIO OUT jacks on the DVD Recorder and AUDIO IN jacks on TV(or AV amplifier). (See pages 21 ~ 23)

NOTE

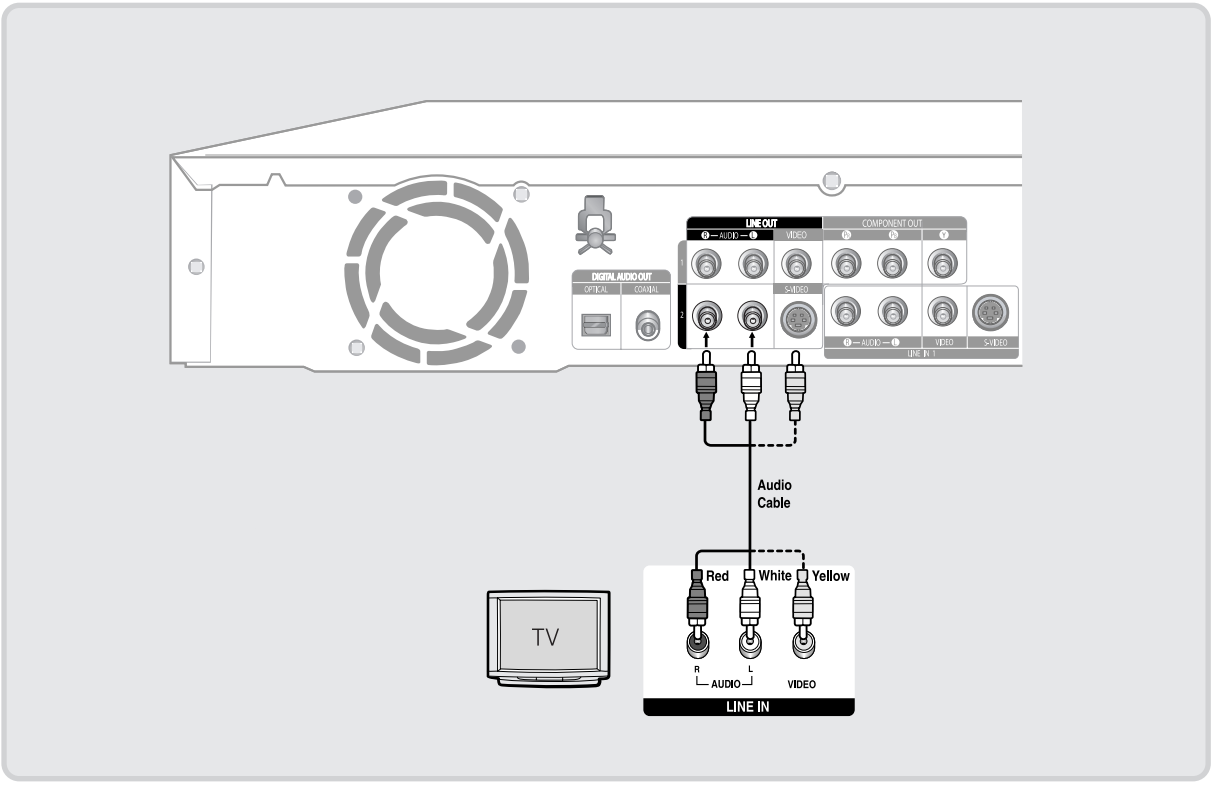
- Compared to standard interlaced video, progressive scan doubles the amount of video lines fed to your TV, resulting in a more stable, flicker-free, and clear image than interlaced video. The progressive scan video output jack is used in progressive output mode. This is only available with TVs that support progressive scan.
- Progressive Scan Output (480p) "Consumers should note that not all high definition television sets are fully compatible with this product and may cause artifacts to be displayed in the picture. If you experience 480p progressive scan picture problems, it is recommended that you switch the connection to the 'standard definition' output. If there are questions regarding TV set compatibility with this model, please contact our customer service center at 1-800-SAMSUNG.

Step 3 : Connecting the Audio cable

There are several ways to connect your DVD Recorder. Select one of the audio connections on the following pages.

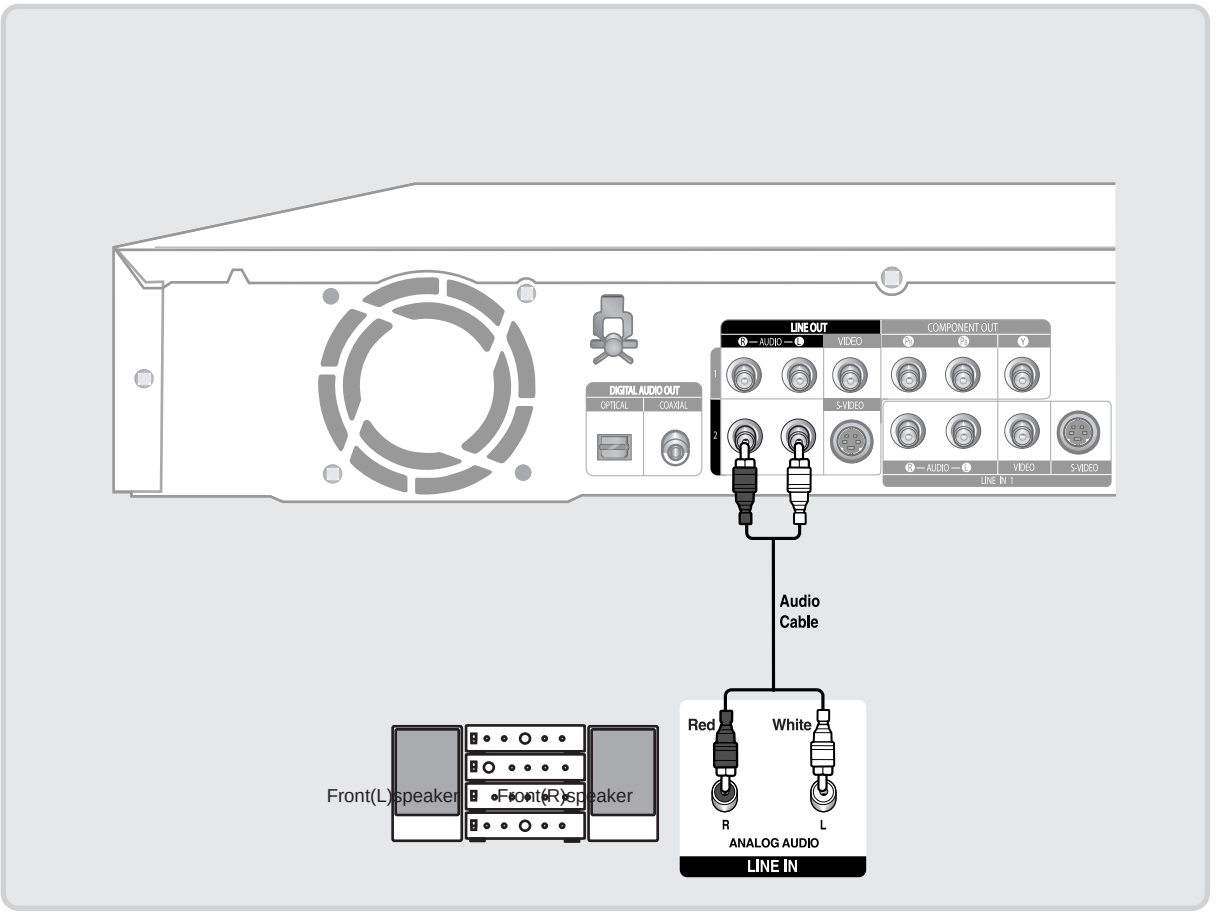
Connecting to your TV

This connection will use your TV's speakers.



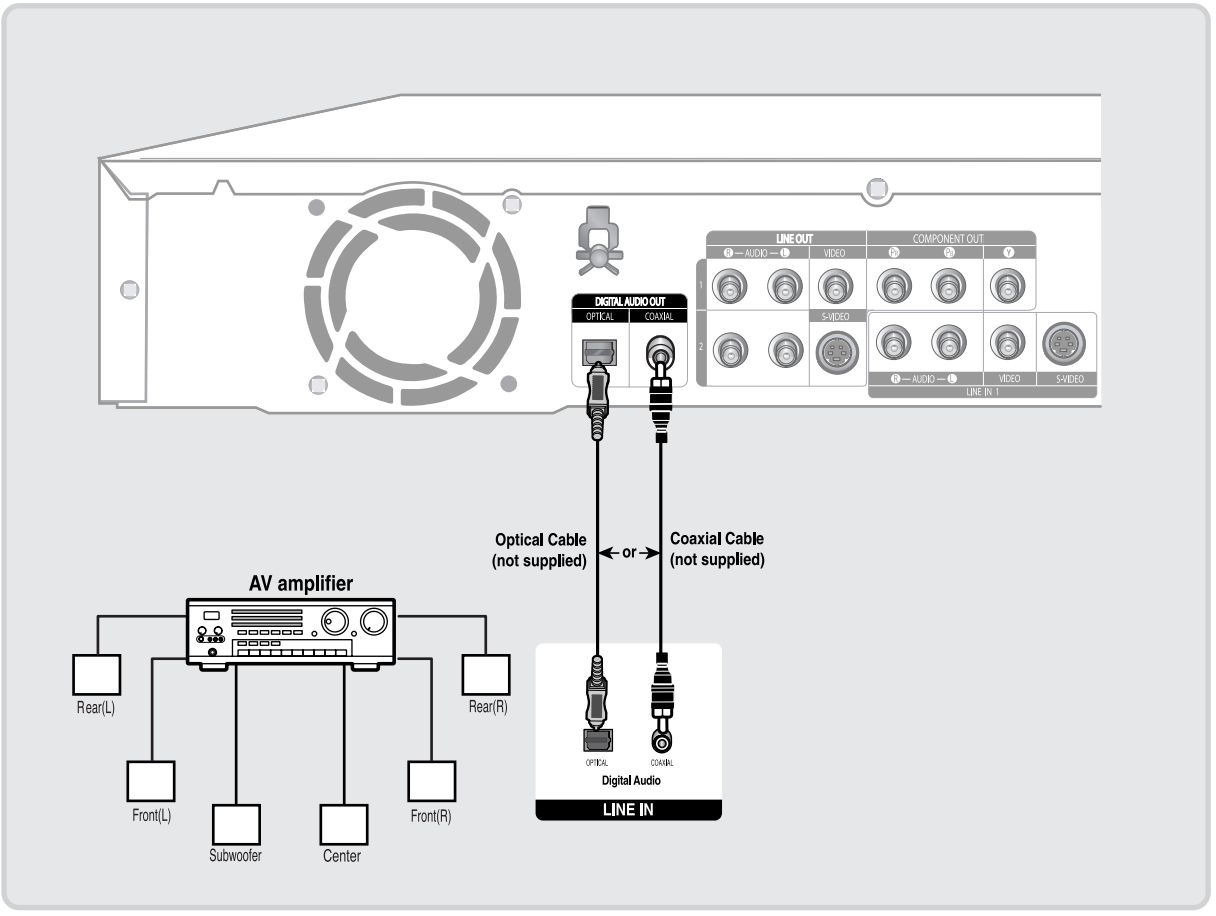
Connecting to a stereo amplifier with analog input jacks

If your stereo amplifier only has AUDIO INPUT jacks(L and R), use the AUDIO OUT jacks.



Connecting to an AV amplifier with a digital input jack

If your AV amplifier has a Dolby Digital or DTS decoder and a digital input jack, use this connection. To enjoy Dolby Digital or DTS sound, you will need to set up the audio settings. (See pages 33 ~ 34)



Manufactured under license from Dolby Laboratories. “Dolby” and the double-D symbol are trademarks of Dolby Laboratories.

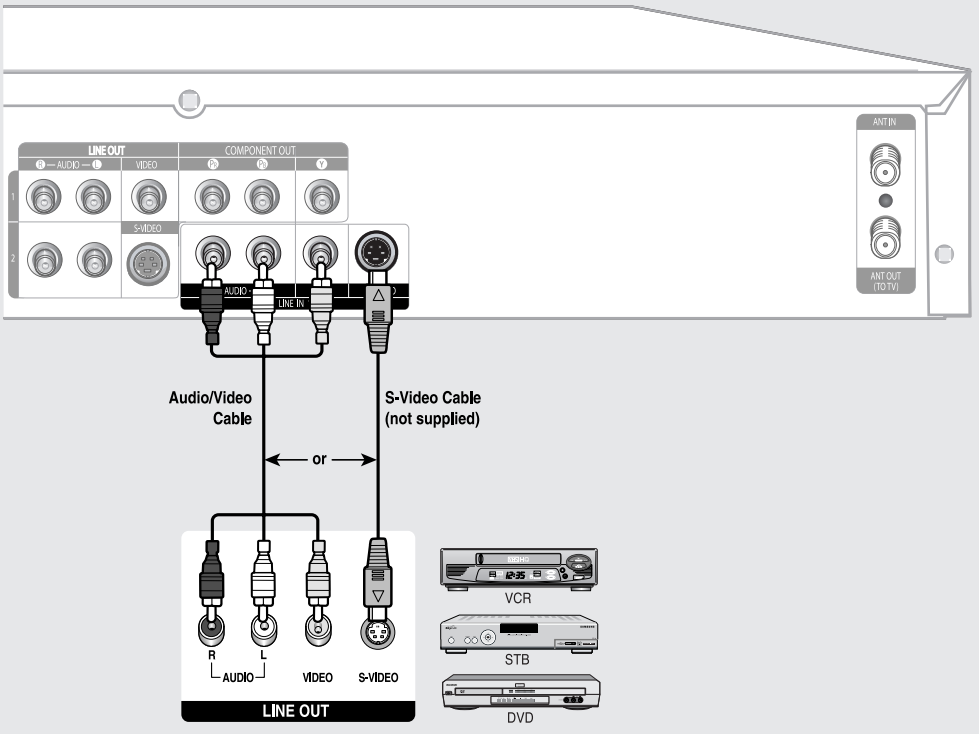
“DTS” and “DTS Digital Out” are trademarks of Digital Theater Systems, Inc.

Step 4 : Connecting external devices

This allows you to connect your DVD Recorder to other external devices and view or record their outputs.

Connecting a VCR, Set-Top Box(STB) or DVD player to the LINE IN 1 jacks

Connecting a VCR or external device to AUDIO/VIDEO LINE IN 1 jacks of the DVD Recorder.
You can record from connected equipment (VCR, STB or DVD).

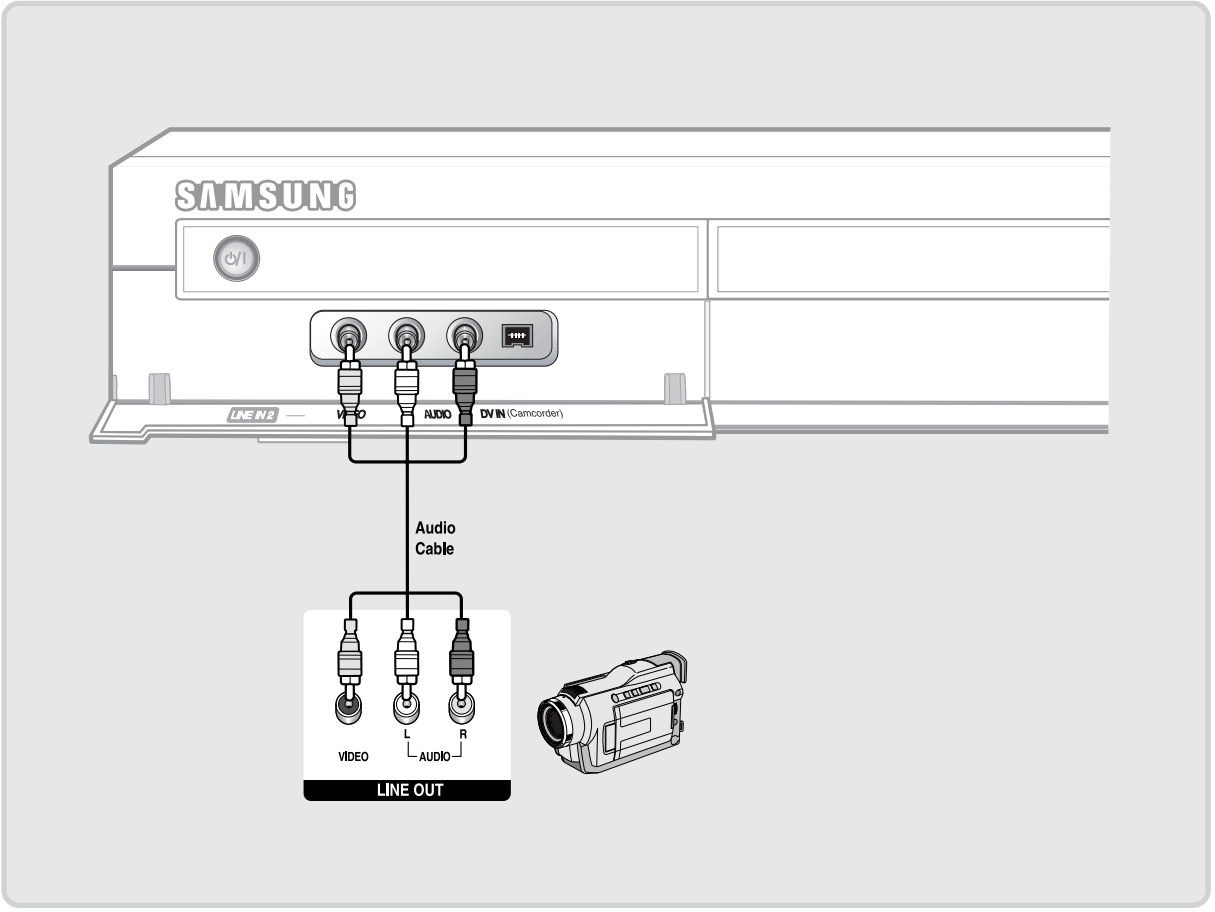


NOTE

- You can also use the LINE IN 2 jacks on the front panel of the DVD Recorder.
- Copy protected content cannot be recorded.

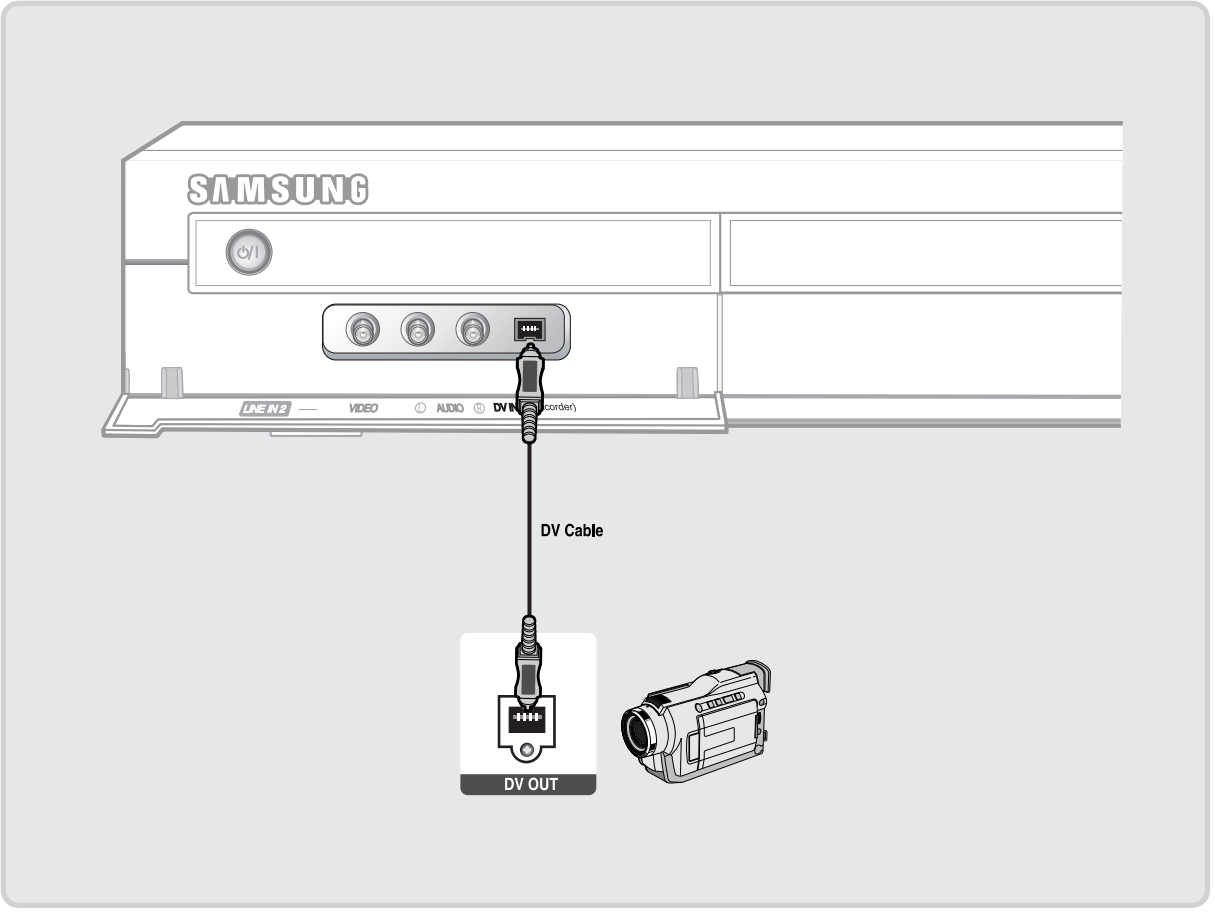
Connecting a Camcorder to the LINE IN 2 jacks

You can also use the LINE IN 2 jacks on the front panel of the DVD Recorder. You can record from connected equipment, such as a camcorder.
When an input source is inserted into LINE 2 while viewing TV, the input will be switched to LINE 2 automatically.



Connecting a Camcorder to the DV IN jack

If your camcorder has a DV output jack, connect it to the DV input jack of your DVD Recorder.



NOTE

- If the input is not selected automatically, press the INPUT button on the remote to select proper input.

Step 5 : Connecting the Power Cord

After all connections are complete, plug the power cord in the wall outlet.

"Auto" appears in the panel display. This means that the current time is being set automatically (Auto Program) through the antenna under connection and also the channel is being set. The setup may take a few minutes.

When the DVD Recorder operates normally, the current time is automatically set and displayed in the front panel display.

NOTE

- After the current time is set automatically, the recorder will perform Auto Channel Memory for about 3 minutes. If power is on, while Auto Channel Memory is in process, Auto Channel Memory will stop. In this case, do Auto Channel Memory from MENU(see pages 31~32).

Step 6 : Preparing the Remote Control

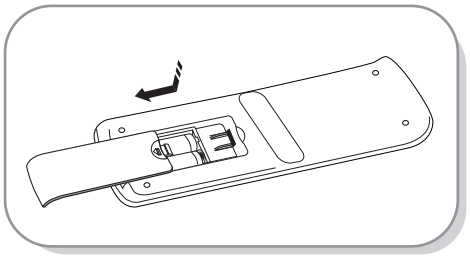
Install Batteries in the Remote Control

- Open the battery cover on the back of the remote.
- Insert two AAA batteries. Make sure that the polarities (+ and -) are aligned correctly.
- Replace the battery cover.

If the remote control does not operate properly:

- Check the polarity + - of the batteries (Dry-Cell)
- Check if the batteries are drained.
- Check if remote sensor is blocked by obstacles.
- Check if there is any fluorescent lighting nearby.

Dispose of batteries according to local environmental regulations. Do not put them in the household trash.



Setting the Remote Control

You can control certain functions of another manufacturer's TV with this remote control. Control function buttons involve: POWER, Channel Up/Down, Volume Up/Down, Direct Number buttons, TV MUTE, INPUT. Depending on the manufacturer, some buttons may not operate.

Controlling TVs with the Remote Control

1. Press and hold the POWER button.
2. Enter a 2-digit code by using the numerical buttons on the remote control.

See "Controllable TV Codes"

If the code works, your TV set will be turned on or off. If it does not respond, try other codes.

Controllable TV Codes

BRAND	BUTTON
AIWA	82
ANAM	10, 11, 12, 13, 14, 15, 16, 17, 18
BANG & OLUFSEN	57
BLAUPUNKT	71
BRANDT	73
BRIONVEGA	57
CGE	52
CONTINENTAL EDISON	75
DAEWOO	19, 20, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34
EMERSON	64
FERGUSON	73
FINLUX	06, 49, 57
FORMENTI	57
FUJITSU	84
GRADIENTE	70
GRUNDIG	49, 52, 71
HITACHI	60, 72, 73, 75
IMPERIAL	52
JVC	61, 79
LG	06, 19, 20, 21, 22, 78
LOEWE	06, 69
LOEWE OPTA	06, 57
MAGNAVOX	40
METZ	57
MITSUBISHI	06, 48, 62, 65
MIVAR	52, 77
NEC	83
NEWSAN	68
NOBLEX	66
NOKIA	74
NORDMENDE	72, 73, 75
PANASONIC	53, 54, 74, 75
PHILIPS	06, 55, 56, 57
PHONOLA	06, 56, 57
PIONEER	58, 59, 73, 74
RADIOLA	06, 56
RADIOMARELLI	57
RCA	45, 46
REX	74
SABA	57, 72, 73, 74, 75
SALORA	74
SAMSUNG	01,02,03,04,05,06,07,08,09
SANYO	41, 42, 43, 44, 48
SCHNEIDER	06
SELECO	74

BRAND	BUTTON
SHARP	36, 37, 38, 39, 48
SIEMENS	71
SINGER	57
SINUDYNE	57
SONY	35, 48
TELEAVA	73
TELEFUNKEN	67, 73, 75, 76
THOMSON	72, 73, 75
THOMSON ASIA	80, 81
TOSHIBA	47, 48, 49, 50, 51, 52
WEGA	57
YOKO	06
ZENITH	63

NOTE

- If you replace the remote control's batteries, you must set the brand code again.

Step 7 : Initial Setup

For ease of use, we recommend that you set up initial settings before using the DVD Recorder.

1. OSD Language Setup

▼

2. Clock Set

▼

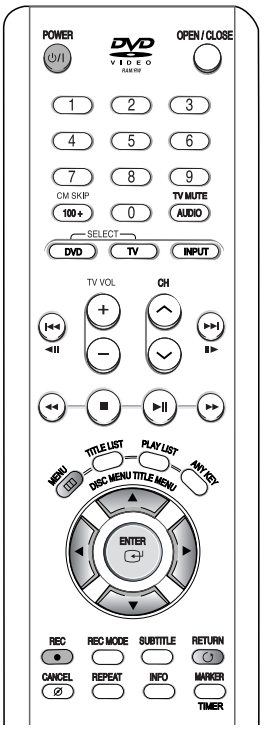
3. Channel Set

▼

4. Audio Setup

▼

5. Video Setup



Before Play,
Turn on your TV and switch the input selector on your TV so that the signal from the DVD Recorder appears on your TV screen. If you connected an external Audio System, turn on your Audio System and select AUX, CD or DVD.
The OSD (On-Screen Display) displayed on the screen may vary depending on conditions such as the disc type and whether the disc has been inserted or not.

1. OSD Language Setup

After plugging in the recorder, the first time you press the POWER button, this screen comes up.
(This screen will only appear when you plug in the recorder for the first time.)

1 Press the POWER button.

2 Press a Number button to select the language.

NOTE

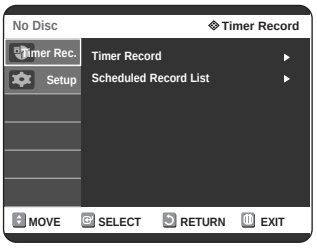
- If the language for the startup screen is not set, the settings may change whenever you turn the power on or off. Therefore, make sure that you select the language you want to use.

2. Clock Set

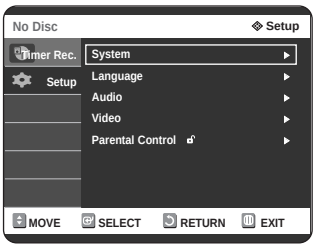
This menu is used to set the current time. You need to set the time to use timer recording.

Auto Clock Set

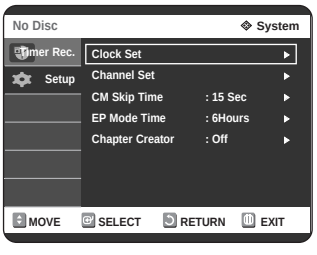
1 With the unit in Stop mode/No Disc mode, press the MENU button.



2 Select Setup using the ▲▼ buttons, then press the ENTER or ▶ button.



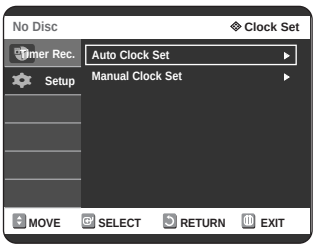
3 Select System using the ▲▼ buttons, then press the ENTER or ▶ button.
System menu will be displayed.



NOTE

- The Menus are slightly different depending on whether a disc is inserted or not. The menus described on the next few pages are with no disc in the unit.

4 Select Clock Set using the ▲▼ buttons, then press the ENTER or ▶ button.
Clock Set menu will be displayed.



You must have the antenna connected to set the Auto Clock. See pages 15~17 for Antenna connections(Method 1, 2 and 3).

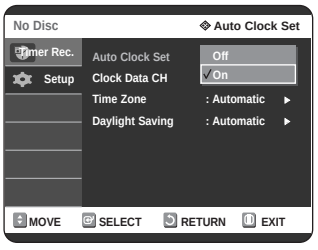
Method 1 and 3

If you have the Antenna connected via Method 1 or 3 on pages 15-17.

The DVD Recorder automatically sets the clock by searching for a channel that carries a time signal and sets your time zone and daylight saving(if applicable).

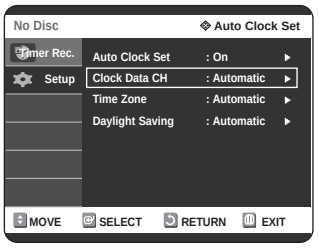
5 Select Auto Clock Set using the ▲▼ buttons, then press the ENTER or ▶ button.

6 Press the ENTER or ▶ button.
Select On using the ▲▼ buttons, then press the ENTER or ▶ button.



If your clock is set to the wrong time zone or daylight saving, you can adjust these settings without tuning off the Auto Clock Set function.

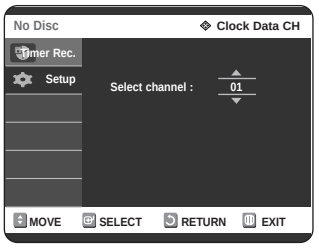
7 Select the sub menu(Clock Data CH, Time Zone or Daylight Saving) using the ▲▼ buttons, then press the ENTER or ▶ button.



Clock Data CH

Select a channel that carries a time signal using the ▲▼ buttons then press the ENTER button.

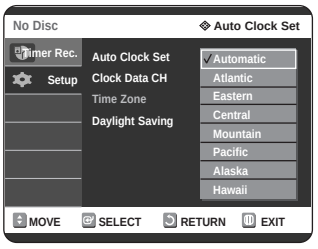
- Select Auto to set the clock data channel automatically.



Time Zone

Select the time zone of your area using the ▲▼ buttons then press the ENTER or ▶ button.

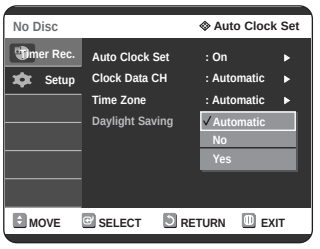
- Select Automatic to set the time zone automatically.



Daylight Saving

Select Yes, No or Automatic using the ▲▼ buttons then press the ENTER or ▶ button.

- Select Automatic to set the daylight saving automatically



Method 2

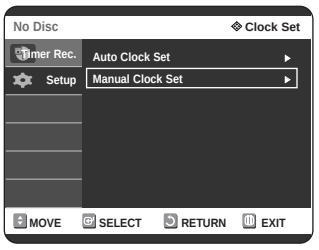
If you have the Antenna connected via Method 2 on page 16.

Manual Clock Set

If your clock cannot be set automatically, set the clock manually.

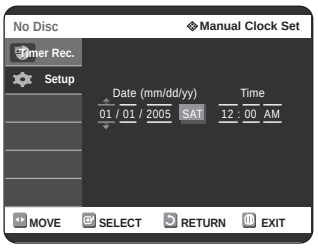
To setup, follow the steps 1 to 4 in page 29.

5 Select Manual Clock Set using the ▲▼ buttons, then press the ENTER or ▶ button.



6 Using the ▼▲◄► buttons to select the Current Date and Current Time, and then press the ENTER button.

When the current time is stored in memory and then the set is powered off, the current time will appear in the front panel display.



▼▲ : Sets the value

You can set the value using the number (0~9) buttons.

◄ ►: Moves to items

NOTE

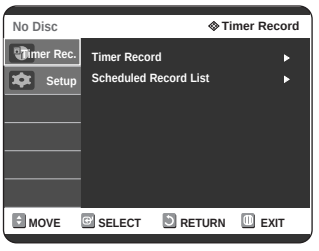
- If any of number buttons on the remote control do not operate, press the DVD button and try again.

3. Channel Set

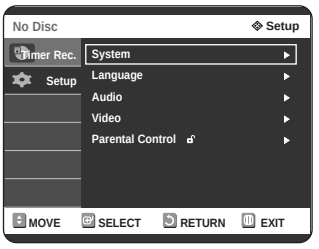
Auto Channel Memory

You can set the Antenna/Cable TV settings automatically.

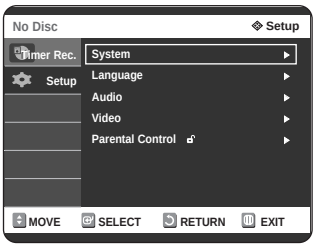
1 With the unit in Stop mode/No Disc mode, press the MENU button.



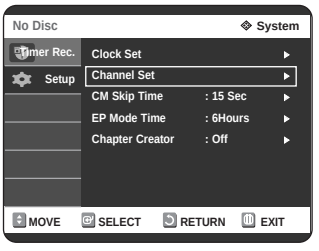
2 Select Setup using the ▲▼ buttons, then press the ENTER or ► button.



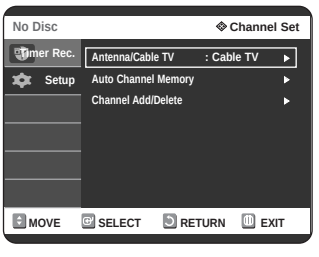
3 Select System using the ▲▼ buttons, then press the ENTER or ► button.



4 Select Channel set using the ▲▼ buttons, then press the ENTER or ► button.



5 Select Antenna/Cable TV(Signal Source) using the ▲▼ buttons, then press the ENTER or ► button.

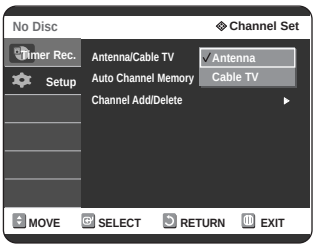


Select the item that matches the antenna connection you selected on pages 15~17(Method 1, 2 and 3).

Methods 1 and 3

To setup, follow the steps 1 to 5 in page 31.

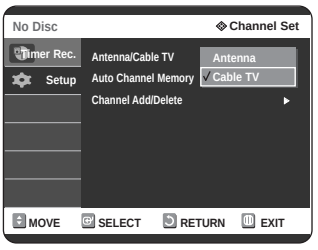
6 Select Antenna using the ▲▼ buttons, then press the ENTER or ▶ button.



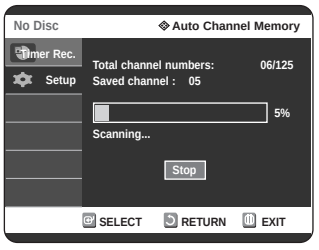
Method 2

To setup, follow the steps 1 to 5 in page 31.

6 Select Antenna or Cable TV(depending on the hookup you chose) using the ▲▼ buttons, then press the ENTER or ▶ button.



7 Select Auto Channel Memory using the ▲▼ buttons, then press the ENTER or ▶ button.
Auto Channel Memory will be displayed.



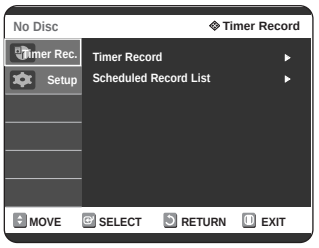
NOTE

- Press the RETURN or ENTER button to stop Auto Channel Memory.

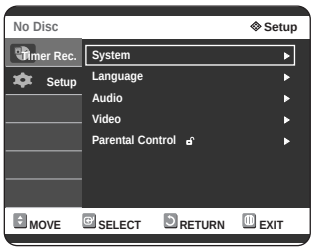
Manual Channel Set

Manual Channel Set can be used after you have first selected Auto Channel Memory.
Use the Manual Channel Setting to delete unnecessary channels after using the Auto Channel Memory.

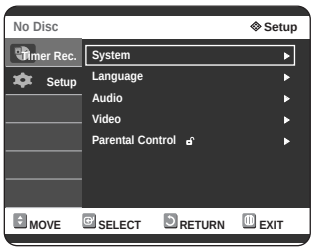
1 With the unit in Stop mode/No Disc mode, press the MENU button.



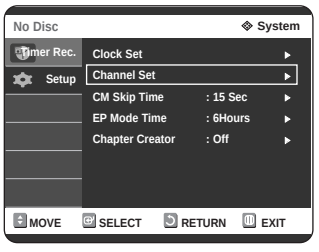
2 Select Setup using the ▲▼ buttons, then press the ENTER or ▶ button.



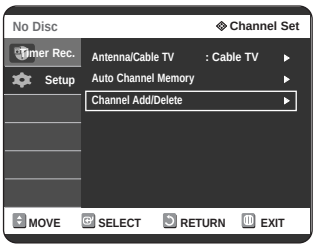
3 Select System using the ▲▼ buttons, then press the ENTER or ▶ button.



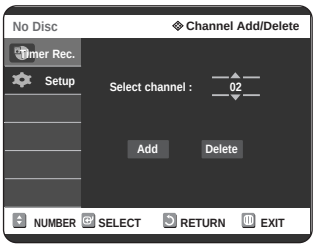
4 Select Channel set using the ▲▼ buttons, then press the ENTER or ▶ button.



5 Select Channel Add/Delete using the ▲▼ buttons, then press the ENTER or ▶ button.



6 Use the ▲▼ or number buttons to select the channels you want to add or delete on the [Select channel] screen. Then, press the ENTER button.



- Using ▲▼ buttons for channel selection allows the user to add/delete one channel at a time.
- Using CH∧ ∨ buttons for channel selection jumps to the next channel memorized in Auto Channel Memory.

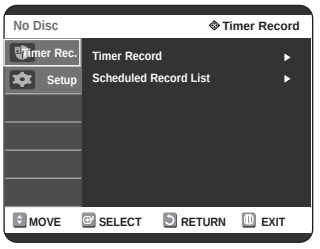
7 Select Add or Delete using the ◀ ▶ buttons,then press the ENTER button.

- The message 'Channel is added.' or 'Channel is deleted.' will be displayed in the center of the screen.
- Continue to add or delete as many channels as you want to memorize or delete. This can be used to add channels not stored automatically due to weak signal strength.
- Press the RETURN button to return to the previous menu. Press the MENU button to exit the menu.

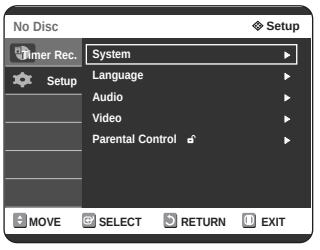
4. Setting Up the Audio Options

You can connect the DVD-R120 to an external amp or Home Theater.
Allows you to setup the audio device and sound status settings depending on the audio system in use.

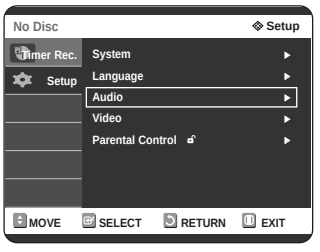
1 With the unit in Stop mode/No Disc mode, press the MENU button on the remote control.



2 Select Setup using the ▲▼ buttons, then press the ENTER or ▶ button.
You can't use the Setup functions while playing a disc.

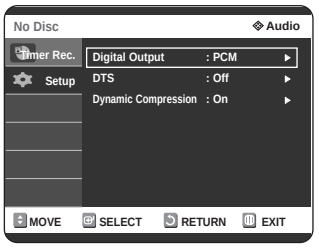


3 Select Audio using the ▲▼ buttons, then press the ENTER or ▶ button.



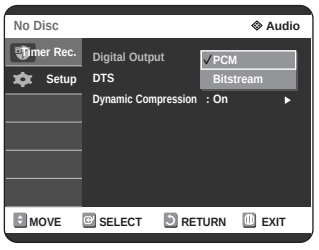
4 Select the sub menu(Digital Output, DTS or Dynamic Compression) using the ▲▼ buttons, then press the ENTER or ▶ button.

Select the item that matches the audio connection you selected on pages 21~23(Method 1, 2 and 3).



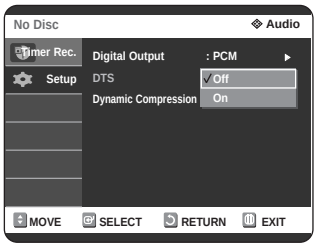
Digital Output

- PCM : Converts to PCM(2CH) 48kHz audio.
  Select PCM if your amplifier system is stereo and/or Dolby Prologic.
- Bitstream : Outputs bitstream (original format) such as Dolby or DTS.
  Select bitstream if your amplifier system has multi channel digital audio surround decoding (Dolby Digital and/or DTS).



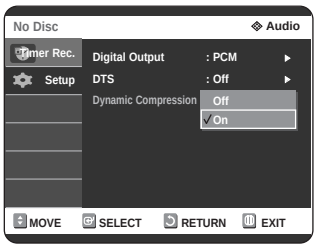
DTS

- Off : Doesn't output DTS bitstream (original format).
- On : Outputs DTS bitstream. (via Digital output)
  Select DTS when connecting to a digital amp with DTS decoder.
- When DTS soundtrack is played, sound is not output from Analog Audio Output.



Dynamic Compression
This is only active when a Dolby Digital signal is detected.

- On : When Movie soundtracks are played at low volume or from smaller speakers, the system can apply appropriate compression to make low-level content more intelligible and prevent dramatic passages from getting too loud.
- Off : You can enjoy the movie with standard Dynamic Range.



5 Use the ▲▼ buttons to select the desired item(PCM, Bitstream, DTS-Off, DTS-On, Dynamic Compression-Off or Dynamic Compression-On). Then press the ENTER or ▶ button.

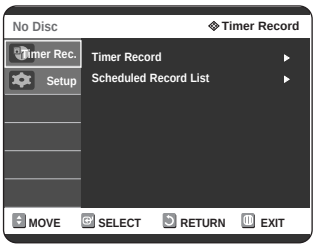
NOTE

- Press the RETURN or ◀ button to return to the previous menu.
  Press the MENU button to exit the menu.

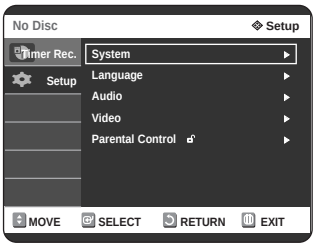
5. Setting Up the TV Aspect

This allows you to set up the TV screen settings.

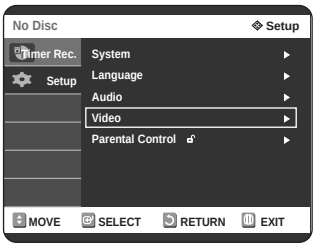
1 With the unit in Stop mode/No Disc mode, press the MENU button.



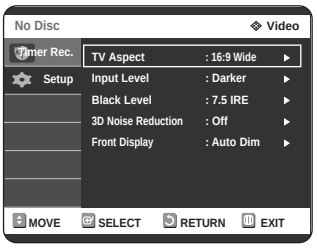
2 Select Setup using the ▲▼ buttons, then press the ENTER or ▶ button.



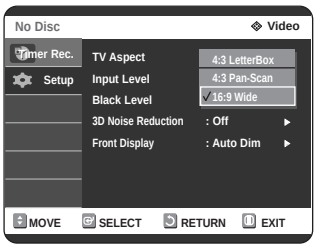
3 Select Video using the ▲▼ buttons, then press the ENTER or ▶ button.



4 Select the TV Aspect using the ▲▼ buttons, then press the ENTER or ▶ button.



5 Use the ▲▼ buttons to select the desired item(4:3 Letter Box, 4:3 Pan-Scan or 16:9 Wide). Then press the ENTER or ▶ button.



If you have a 4:3 standard TV

- **4:3 Letter Box** : Select when you want to see the total 16:9 ratio screen DVD supplies, even though you have a TV with a 4:3 ratio screen. Black bars will appear at the top and bottom of the screen.
- **4:3 Pan-Scan** : Select this for a conventional size TV when you want to see the central portion of the 16:9 screen. (Extreme left and right side of movie picture will be cut off.)

If you have a wide screen TV or 4:3 standard TV with a wide-screen mode

- **16:9 Wide** : You can view the full 16:9 picture on your widescreen TV.

Recording

This section shows various DVD recording methods.

Before Recording 36

Recording the current TV program you are watching 38

Recording from external equipment.....40

Copying from a Camcorder.....41

Making a One Touch Recording (OTR).....42

Setting a Timer Recording.....43

Flexible Recording (only for Timer recording).....44

Editing the Scheduled Record List 44

Deleting the Scheduled Record List 45

Recording the Scheduled Record List 46

Before Recording

This unit can record on various types of discs. Before recording, read the following instructions and select the disc type according to your preference.

Recordable discs

This recorder can record on the following discs.

DVD-RAM	DVD-RW	DVD-R
DVD RAM	DVD RW	DVD R

- DVD-RWs and DVD-RAMs are rewritable.
- DVD-Rs are non-rewritable

Compatibility between Samsung and Other Companies' Recorders

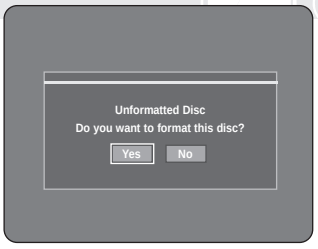
Disc Types	Recording format	Recording Device	Finalizing	Additional Recording in Samsung Recorder
DVD-RAM	VR Mode	Samsung	X	Recordable
		Other Company	X	Recordable
DVD-RW	VR Mode	Samsung	finalized	Not recordable
			not finalized	Recordable
		Other Company	finalized	Not recordable
			not finalized	Recordable
	V Mode	Samsung	finalized	Not recordable
			not finalized	Recordable
		Other Company	finalized	Not recordable
			not finalized	Not recordable
DVD-R	V Mode	Samsung	finalized	Not recordable
			not finalized	Recordable
		Other Company	finalized	Not recordable
			not finalized	Not recordable

NOTE

- Finalize
  - This closes the DVD-R/RW so no additional recording can be done.
- Unfinalize
  - This allows additional recording on a DVD-RW disc originally recorded on the DVD-R120.
  - A DVD-RW disc that has been recorded by DAO(Disc At once) in a PC cannot be unfinalized.
  - A DVD-RW disc that has been recorded in Video Mode of a different maker's recorder cannot be unfinalized.
  - A DVD-R disc cannot be unfinalized.

Recording Formats

Since available functions differ depending on the disc type, select a disc that best fits your preferences; When you insert an unused disc, the following message appears
DVD-RAM: Use after formatting the disc.



DVD-RW: When a blank disc is first inserted, the message “Do you want to initialize this disc?” will appear. When Yes is selected, the disc will be formatted in VR Mode.

If you want to format in either VR Mode or Video Mode, refer to Formatting a Disc on page 86.

DVD-R: Formatting DVD is unnecessary and only Video Mode Recording is supported

DVD-RW(Video mode)/-R

- Chapters will be created automatically when you finalize recording on DVD-R / DVD-RW discs in Video mode. The chapter’s length (interval between chapters) varies according to the recording mode.
- Simple editing (erasing titles/changing title name)

DVD-RW(VR mode)/-RAM

- This mode allows multiple editing functions (such as deletion of the whole title, partial deletion of a title, etc.)
- Various editing options using a created Playlist

Recording Mode

Select one of four recording modes by pressing the REC MODE button repeatedly while the unit is in Stop mode for the desired recording time and picture quality.
In general, picture quality improves as the recording time decreases.
In FR mode, the most suitable record mode is adjusted automatically, according to remaining time on the disc and length of the timer recording. This function is selected only one mode in XP,SP,LP and EP modes. And you can use this mode for timer recording.

Mode	Characteristic	Recording Times Data Rates
XP (high quality mode)	Select when the video quality is important.	Approx. 1 hour about 8 Mbps
SP (standard quality mode)	Select to record in standard quality.	Approx. 2 hours about 4 Mbps
LP (long recording mode)	Select when a long recording time is required.	Approx. 4 hours about 2 Mbps
EP (extended mode)	Select when a longer recording time is required.	Approx. 6 hours/ about 1.2 Mbps Approx. 8 hours/ about 0.8 Mbps
FR (Flexible Recording)	for timer recording only see page 38.	Approx 60 to 480 Min Approx 0.8 to 8Mbps

Unrecordable video

Video with copy protection cannot be recorded on this DVD Recorder. When the DVD Recorder receives a copy guard signal while recording, recording stops and the following message appears on the screen.

Concerning Copy Control Signals

TV broadcasts that contain copy control signals may have one of the following three signal types, COPY-Free, Copy-Once and Copy-Never. If you want to record a copy-once type program, use DVD-RW with CPRM in VR Mode and DVD-RAM.

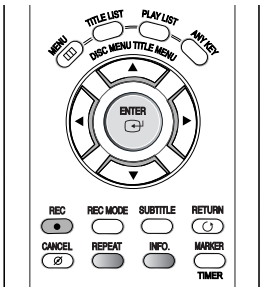
Media \ Signal type	Copy-Free	Copy-Once	Copy-Never
DVD-RW(Ver.1.1)	O	-	-
DVD-RW(Ver.1.1) with CPRM			
VR mode	O	O*	-
Video mode	O		-
DVD-R	O	-	-
DVD-RAM(Ver.2.0)	O	O*	-

Once “Copy Once” has been recorded, recording cannot be done anymore.

- Content Protection for Recordable Media (CPRM)

CPRM is a mechanism that ties a recording to the media on which it is recorded. It is supported by some DVD recorders, but not by many DVD players. Each blank recordable DVD has a unique 64-bit media ID etched in the BCA. When protected content is recorded onto the disc, it can be encrypted with a 56-bit C2 (Cryptomeria) cipher derived from the media ID.
During playback, the ID is read from the BCA and used to generate a key to decrypt the contents of the disc.
If the contents of the disc are copied to other media, the ID will be absent or wrong and the data will not be decryptable.

About INFO Key

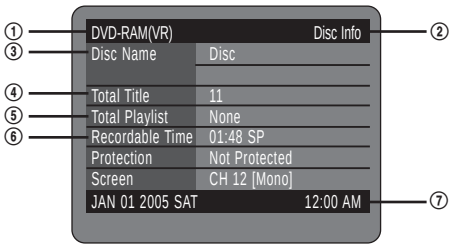


The INFO function allows you to view the current status and progress of playback and recording. Depending on the disc type and status, the displayed screen may be different.

Checking the available disc space (Disc Information)

When recording on an used disc, make sure that there is enough disc space for recording. With DVD-RWs or DVD-RAMs, you can free up disc space by erasing titles.

- Press the INFO button.
  The disc information display window appears.
  Items in the display differ depending on the disc type or recording format.



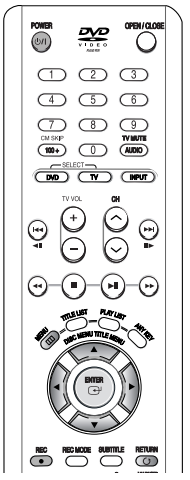
① Disc Type
② Current information display status
③ Disc Name
④ Total Titles : Total number of titles
⑤ Total Playlist : Total number of Playlists
⑥ Recordable Time : The longest continuous recording time in each of the recording modes(approximate)
⑦ Date : Current date and time

Recording the current TV program you are watching

DVD-RAM DVD-RW DVD-R

Before you start

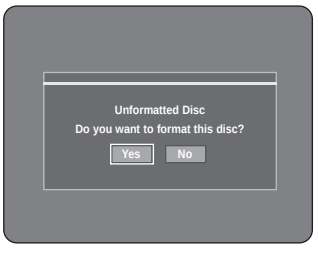
Check that the disc has enough available space for the recording. Adjust the recording picture quality mode (see page 37).



1 **Press the OPEN/CLOSE button and place a recordable disc on the disc tray.**

2 **Press the OPEN/CLOSE button to close the disc tray.**
Wait until "LOAD" disappears from the front panel display.

DVD-RAM
If an unused DVD-RAM disc is used, you will be prompted to format first. Make your selection using the ◄► buttons , then press ENTER.(See page 37)



DVD-RW
If an unused DVD-RW disc is used, you will be prompted to initialize first. Make your selection using the ◄► buttons, then press ENTER.(See page 37)

3 Press the CH (∧/∨) or number (0~9) buttons to select the current program you want to record.

4 Press the REC MODE button repeatedly, (or press the REC MODE button and then press the ▲▼ button) to select the recording speed(quality).

SP → LP → EP → XP

5 Press the REC button.

Information concerning the channel is displayed on the screen and then recording begins. Icon( ) is displayed on the front panel.

To view the current status of the disc and progress of recording : Press the INFO button, and the information about the disc will appear.

DVD-RAM(VR)	Disc Info
Disc Name	
Total Title	15
Total Playlist	2
Recordable Time	02:00 SP
Protection	Not Protected
Screen	Recording CH 7 [Mon]
APR 24 2005 SUN	12:00 AM

Press the INFO button once again to view information about the recording.

DVD-RAM(VR)	Recording Info
Name	APR/04/2005 12:00 AM
	CH7
Recording Title	15
Created Time	APR/04/2005 12:00 AM
Recording Time	00:02:05
APR 24 2005 SUN	12:00 AM

To stop recording

Press the STOP ( ) button to stop or finish a recording in progress.

- When using DVD-RAM/DVD-RW/DVD-R discs, the message 'Updating the information of disc. Please wait for a moment' is displayed.

To pause recording

Press the play/pause ( ) button to pause a recording in progress.

Press the play/pause ( ) button again to resume a recording.

NOTE

- You can not change the recording mode and the channel while recording.
- Recording will stop automatically if there is no free space left for recording.
- Up to 99 titles can be recorded onto a disc.
- Recording will stop automatically if a copy protected image is selected.
- If you are using a Cable Box(no antenna), you cannot watch a different cable TV program from the one you're recording.
- DVD-RAM/DVD-RW discs must be formatted before starting to record. Most new discs are sold unformatted.
- Do not use DVD-R authoring discs with this unit.

Recording from external equipment

DVD-RAM DVD-RW DVD-R

Before you start

Check that the disc has enough available space for the recording. Adjust the recording mode.

1 Press the OPEN/CLOSE button, and place a recordable disc on the disc tray.

2 Press the OPEN/CLOSE button to close the disc tray.

Wait until "LOAD" disappears from the front panel display.

If an unused DVD-RAM disc is used, whether to format or not will be asked first. (See page 37)

If an unused DVD-RW disc is used, whether to initialize or not will be asked first. (See page 37)

3 Press the INPUT button to select the input source according to the connection you made.

The front panel display changes in the following sequence:

→ Channel Number → L1 → L2 → DV ┐

If you connect a digital camcorder, press the INPUT button to select DV. (See page 41)

4 Press the REC MODE button repeatedly, (or press the REC MODE button and then press the ▲▼ button) to select the recording speed(quality).

→ SP → LP → EP → XP ┐

5 Press the REC button.

To stop recording

Press the STOP (⊙) button to stop or finish a recording in progress.

- When using DVD-RAM/DVD-RW/DVD-R discs, the message 'Updating the information of disc. Please wait for a moment' is displayed

NOTE

- You can not change the recording mode and input source while recording.
- Recording will stop automatically if there is no free space left for recording.
- Up to 99 titles can be recorded onto a disc.
- Recording will stop automatically if a copy protected image is selected.
- DVD-RAM/DVD-RW discs must be formatted before starting to record. Most new discs are sold unformatted.
- Do not use DVD-R authoring discs with this unit.

Copying from a Camcorder

You may control the Camcorder using the IEEE1394 (DV) interface.

DVD-RAM DVD-RW DVD-R

Before you start

Check that the disc has enough available space for the recording. Adjust the recording mode.

1 **Press the OPEN/CLOSE button, and place a recordable disc on the disc tray.**

2 **Press the OPEN/CLOSE button to close the disc tray.**

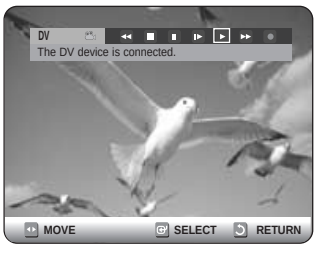
Wait until "LOAD" disappears from the front panel display.
If an unused DVD-RAM disc is used, whether to format or not will be asked first. (See page 37)
If an unused DVD-RW disc is used, whether to initialize or not will be asked first. (See page 37)

3 **Press the REC MODE button repeatedly, (or press the REC MODE button and then press the ▲▼ button) to select the recording speed(quality).**

SP → LP → EP → XP

4 **Press the INPUT button to select DV.**

If the input is set to DV, a playback/record menu that enables camcorder control appears on the top of the screen.



5 **Select the Play icon on the upper part of the screen to playback the camcorder and find the starting position to copy.**

You can press the PLAY button of the remote control to playback the camcorder.

6 **To start recording, use the ◀ ▶ to select rec(●) icon in the top side of the screen, then press the ENTER button.**

You can press the REC button of the remote control to start recording. To display playback related icons on the screen, press any direction button on the remote control.

To stop recording

Press the STOP (⊙) button to stop or finish a recording in progress.

- When using DVD-RAM/DVD-RW/DVD-R discs, the message 'Updating the information of disc. Please wait for a moment' is displayed

NOTE

- You can not change the recording mode and input source while recording.
- Recording will stop automatically if there is no free space left for recording.
- Up to 99 titles can be recorded onto a disc.
- Recording will stop automatically if a copy protected image is selected.
- DVD-RAM/DVD-RW discs must be formatted before starting to record. Most new discs are sold unformatted.
- Do not use DVD-R authoring discs with this unit.

Making a One Touch Recording (OTR)

DVD-RAM DVD-RW DVD-R

You can set the DVD-Recorder to record in 30-minute increments by pressing the REC button.

1 If you want to record a TV channel, use the CH(⌃/⌄) buttons or number buttons to select a desired channel.
If you want to record through a connected external component, press the INPUT button to select an appropriate external input(LINE1, LINE 2 or DV).

- CATV channels: 1 to 125
- TV channels: 2 to 69

Example 1) Selecting Channel 120

100+ + 2 + 0

Example 2) Selecting Channel 9

0 + 9

2 Press the REC button to start recording.

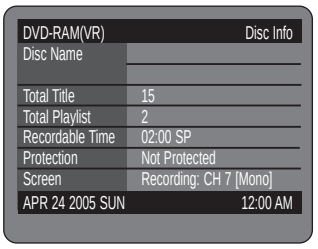
3 Press the REC button to adjust the recording time.

0:30 → 1:00 → ... 8:00 → off

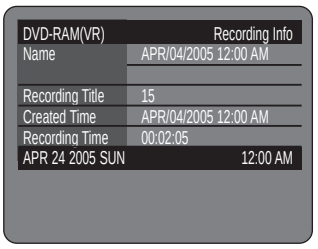
NOTE

- The timer counter decreases minute 8:00 to 0:00, then the DVD Recorder stops recording.

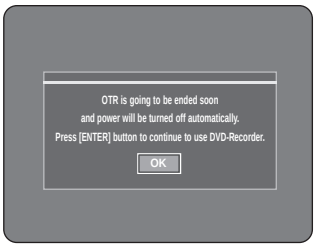
To view the current status of the disc and progress of recording : Press the INFO button, and information about the disc will appear.



Press the INFO button once again. Then you can check the information about the title being recorded.


DVD-RAM(VR) Recording Info
Name APR/04/2005 12:00 AM
Recording Title 15
Created Time APR/04/2005 12:00 AM
Recording Time 00:02:05
APR 24 2005 SUN 12:00 AM

30 seconds before the recording is done, a message asking whether you want the recorder to power off when the recording is done, will appear on your screen.


OTR is going to be ended soon
and power will be turned off automatically.
Press [ENTER] button to continue to use DVD-Recorder.
OK

To stop recording

Press the STOP (⊙) button. The message “Do you want to stop recording?” is displayed.

- Press the ◄ ► buttons to select Yes, and then press the ENTER button.

Setting a Timer Recording

You need to set clock (Setup – Clock Set) before proceeding with a timer recording. (See page 29)

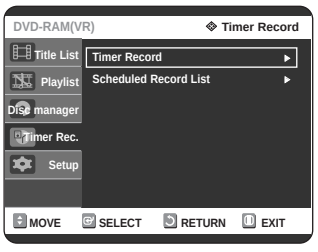
DVD-RAM DVD-RW DVD-R

1 **Press the OPEN/CLOSE button, and place a recordable disc on the disc tray.**

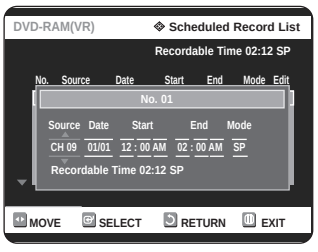
2 **Press the OPEN/CLOSE button to close the disc tray.**
Wait until "LOAD" disappears from the front panel display.
If an unused DVD-RAM disc is used, whether to format or not will be asked first. (See page 37)
If an unused DVD-RW disc is used, whether to initialize or not will be asked first. (See page 37)

3 **Press the MENU button in stop mode.**
You can also set a timer recording via the TIMER button.

4 **Press the ▲▼ buttons to select Timer Rec., and then press the ENTER or ▶ button.**



5 **Press the ▲▼ buttons to select Timer Record, and then press the ENTER or ▶ button.**
The Timer Record Input items are displayed.



6 **Fill in the items using the ▲▼◀▶ buttons.**
◀▶ : Moves to the previous/next item,
▲▼ 0~9 : Sets a value.

- **Source:** The video input source (L1, L2), or the broadcasting channel you want to make a timer recording of. When selecting channels to be recorded, the ▲▼ buttons on the remote control can let you select only the channels that have been memorized during Auto Scan. For the selection of other channels, use the number buttons.
- **Date:** Date that the timer recording starts

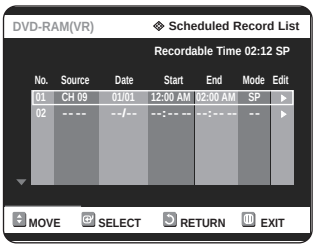
01/01	Every Day
01/02	MON-SAT
⋮	MON-FRI
01/30	Every SAT
01/31	⋮
	Every SUN

- **Start/End Time:** Start and end time of the timer recording
- **Mode (Recording mode)**
  XP (High quality): Approx. 1 hour
  SP (Standard quality): Approx. 2 hours
  LP (Long recording): Approx. 4 hours
  EP (Extended): Approx. 6 hours or 8 hours.
  FR (Flexible Recording): See page 44.

NOTE

- When you are recording at EP mode on a DVD-RW(V)/R disc, it may not record the full 6 or 8 hours because the unit uses the VBR(Variable Bit Rate) ENCODING system. For example, if you record a program with a lot of action, it uses a higher bit rate which in turn consumes more disc memory.

7 **Press the ENTER button.**



- (◴) and Timer Set will appear on the front panel display. This means that a timer recording is set.
- Recording is automatically performed when the set time is reached.

NOTE

- **If you make a mistake**
  Press the ◀▶ button to select the item you want to change.
- **If the timer settings overlap**
  The programs are recorded in order of priority. If timer recording is set for the first program and then again for the second program and both programs overlap, the following message will appear on the screen: 'This setting is identical with 1' The message shows that the first program has priority.
  After recording of the first program is complete, the second program starts being recorded.
- **To exit without saving the current setting**
  Press the MENU or TIMER button.
- **To return to the previous menu**
  Press the RETURN button if you don't want to set a timer recording.

NOTE

- The timer recording time may differ from the set time depending on the disc and the overall timer recording status (for example, recording times overlapping, or when the previous recording ends within 3 minutes of the start of the next recording.)
- ◴ will start blinking if 'Timer Recording' is not ready to start.

Flexible Recording (for Timer recording only)

DVD-RAM DVD-RW DVD-R

In FR mode, the most suitable record mode is adjusted automatically, according to remaining time on the disc and length of the timer recording. This function is selected only one mode in XP,SP,LP and EP modes. And you can use this mode for timer recording.

The FR mode recording setup is the same as Timer Recording. When setting the mode in step 6, set FR Mode.

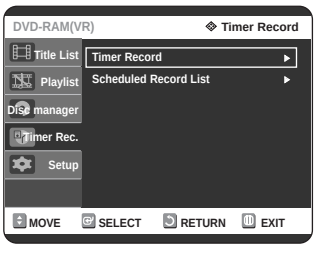
Editing the Scheduled Record List

DVD-RAM DVD-RW DVD-R

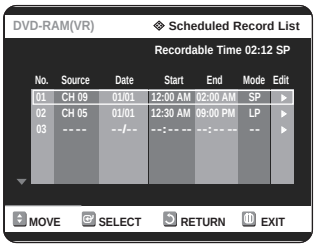
You can change timer record settings using the scheduled record list menu.

1 Press the MENU button in stop mode.

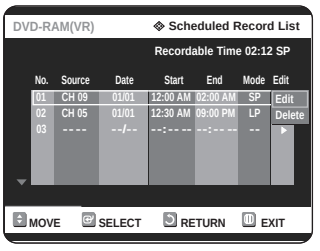
2 Press the ▲▼ buttons to select Timer Rec., and then press the ENTER or ▶ button.



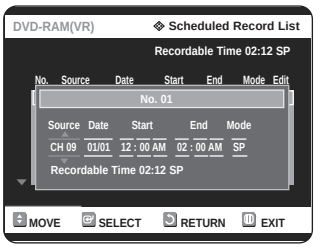
3 Press the ▲▼ buttons to select Scheduled Record List, and then press the ENTER or ▶ button.


DVD-RAM(VR)
Scheduled Record List
Recordable Time 02:12 SP
No. Source Date Start End Mode Edit
01 CH 09 01/01 12:00 AM 02:00 AM SP
02 CH 05 01/01 12:30 AM 09:00 PM LP
03 ---- --/-- --:-- -- --:-- -- --
MOVE
SELECT
RETURN
EXIT

4 Press the ▲▼ buttons to select the number of the Scheduled Record List you want to edit, and then press the ENTER or ▶ button.
The Edit and Delete items are displayed.



5 Press the ▲▼ buttons to select Edit, and then press the ENTER or ▶ button.
The Timer Record Input item is displayed.



Edit the items you want to modify. See the Timer Record section for more information on Timer Record Input items. (See page 43.)

6 Move through the items with the ◀▶ buttons and change the settings with ▲▼ or number buttons and press the ENTER button.

7 Press the MENU button after the operation is finished.
The menu screen will disappear.

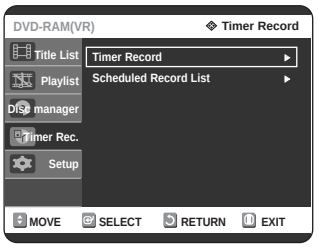
Deleting the Scheduled Record List

DVD-RAM DVD-RW DVD-R

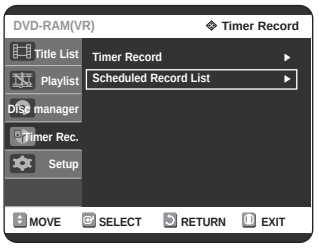
You can delete timer record list using the scheduled record list menu.

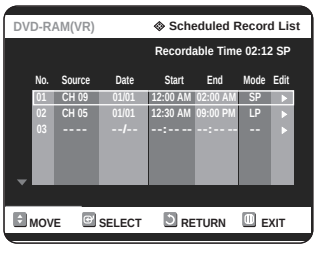
1 Press the MENU button in stop mode.

2 Press the ▲▼ buttons to select Timer Rec., and then press the ENTER or ▶ button.

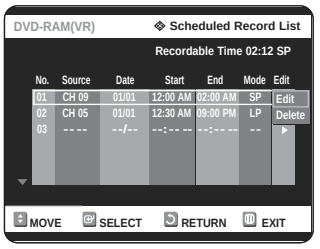


3 Press the ▲▼ buttons to select Scheduled Record List, and then press the ENTER or ▶ button.

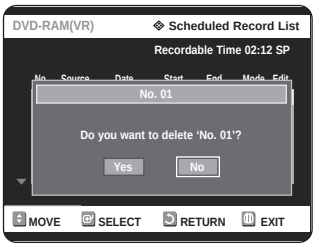



DVD-RAM(VR)
Scheduled Record List
Recordable Time 02:12 SP
No. Source Date Start End Mode Edit
01 CH 09 01/01 12:00 AM 02:00 AM SP
02 CH 05 01/01 12:30 AM 09:00 PM LP
03 ---- --/-- --:-- -- --:-- -- --
MOVE
SELECT
RETURN
EXIT

4 Press the ▲▼ buttons to select the number of the timer recording you want to delete, and then press the ENTER or ▶ button.
The Edit and Delete items are displayed.



5 Press the ▲▼ buttons to select Delete, and then press the ENTER or ▶ button.
You will be prompted with the delete confirmation message, For example : 'Do you want to delete No.01?'.



6 Press the ◀▶ buttons to select Yes, and then press the ENTER button.
The selected entry will be deleted from the list.

7 Press the MENU button after the operation is finished. The menu screen will disappear.

NOTE

- You can not delete programs that are currently recording.

Recording the Scheduled Record List

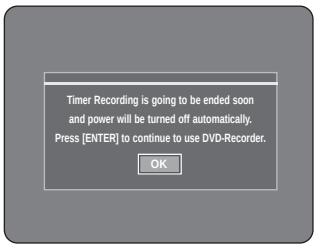
1 When the start time set in the Scheduled Record List arrives, if the set is powered off, the set will be automatically powered on and starts recording. If the set is already powered on, a message asking to confirm to proceed or cancel the timer recording appears.

- When “Yes” is selected: Cancel
- When “No” is selected: Recording

NOTE

- If you are not present to set Yes or No, recording will still begin automatically.

2 Thirty seconds before the stop time, a message that asks whether to automatically power off or not after recording is displayed.


Timer Recording is going to be ended soon
and power will be turned off automatically.
Press [ENTER] to continue to use DVD-Recorder.
OK

- When “OK” is selected: Power on after recording
- If there is no entry: Auto power off

NOTE

- If you are not present to select OK, the unit will power off automatically after the recording finishes.

To stop Recording

Press the STOP(⊙) button, and a message that asks whether to end recording or not will be displayed.

- When “Yes” is selected: Recording stops
- When “No” is selected: Recording continues

NOTE

- If there is not enough disc space or a copy prevention signal is received during recording, recording will stop.

- If there is no free disc space or the disc is not recordable, recording will not operate. (You can record after replacing the disc.)

Playback

This section introduces basic functions of playback and playback by disc type.

Dolby Digital | DTS | Digital Audio

Stereo | NTSC broadcast system in U.S.A, Canada, Korea, Japan,etc. | MP3

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Before Playing

Read the following information before playing a disc.

Region code (DVD-Video only)

Both the DVD recorder and the discs are coded by region. These regional codes must match in order for the disc to play. If the codes do not match, the disc will not play. The Region Number for this recorder is described on the rear panel of the recorder.

Disc types that can be played

Disc Types	Disc Logo	Recorded content	Disc Shape	Max. Playing Time
DVD-VIDEO	DVD VIDEO	AUDIO + VIDEO	Single sided(5")	240
			Double sided(5")	480
			Single sided(3.5")	80
			Double sided(3.5")	160
AUDIO-CD	COMPACT disc DIGITAL AUDIO	AUDIO	Single sided(5")	74
			Single sided(3.5")	20
JPEG CD-R/RW		JPEG Images	Single sided(5")	-
			Single sided(3.5")	-
MP3 CD-R/RW		MP3 Audio	Single sided(5")	-
			Single sided(3.5")	-
DVD-RAM	DVD RAM	AUDIO + VIDEO	Single-sided 5" (4.7GB)	1 (XP: Excellent Quality)
				2 (SP: Standard Quality)
				4 (LP: Long Playback)
				6 or 8 (EP:Extended)
			Double-sided 5" (9.4GB)	2 (XP: Excellent Quality)
				4 (SP: Standard Quality)
				8 (LP: Long Playback)
				12 or 16 (EP:Extended)
DVD-RW	DVD RW	AUDIO + VIDEO	5" (4.7GB)	1 (XP: Excellent Quality)
				2 (SP: Standard Quality)
				4 (LP: Long Playback)
				6 or 8 (EP:Extended)
DVD-R	DVD R	AUDIO + VIDEO	5" (4.7GB)	1 (XP: Excellent Quality)
				2 (SP: Standard Quality)
				4 (LP: Long Playback)
				6 or 8 (EP:Extended)

NOTE

- Depending on the disc type, it may take up to one minute to load.

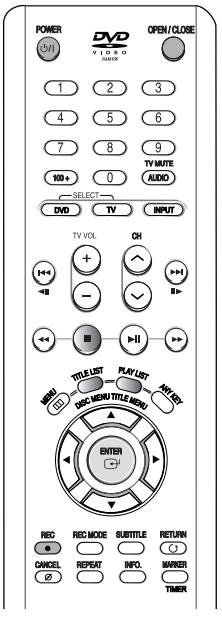
Discs that cannot be played

- DVD-Video with a region number other than "1" or "ALL"
- 5″ 2.6 GB and 5.2 GB DVD-RAM
- 3.9 GB DVD-R Disc for Authoring.
- DVD-RAM, DVD-RW(VR mode) not recorded following the Video Recording Standard
- Unfinalized DVD-R,unfinalized DVD-RW(V mode) recorded on other equipment.
- PAL discs
- DVD-ROM/DVD+RW/PD/MV-Disc/DiVX Video Disc, etc.
- Video CD/CVD/SVCD/CD-ROM/CDV/CD-G/CD-I

NOTE

- This DVD recorder can only operate with discs that are compatible with DVD-RAM Standard Version 2.0.
- Playback and/or recording may not work for some types of discs, or when specific operations, such as angle change and aspect ratio adjustment, are being performed. Information about the discs is written in detail on the box. Please refer to this if necessary.
- Do not allow the disc to become dirty or scratched. Fingerprints, dirt,dust,scratches or deposits of cigarette smoke on the recording surface may make it impossible to use the disc for recording.
- DVD-RAM/RW/R discs may not be able to play on some DVD players, depending on the player, disc and the condition of the recording.
- Discs with PAL programs recorded on them can not be recorded on using this product.

Playing a Disc



1 **Press the OPEN/CLOSE button.**
The tray opens.

2 **Place a disc gently into the tray with the disc's label facing up.**
For DVD-RAM discs, insert the printed side facing up.

3 **Press the OPEN/CLOSE button to close the disc tray.**

- Your DVD Recorder closes the disc tray and plays the disc automatically.
- The recorder does not play discs automatically after the initial power on.
- When the recorder is powered on and a disc is in the tray, the unit will be activated and wait in stop status.
- Press PLAY button to start playback.
- If you insert an MP3 Disc, your DVD Recorder will display the file list on the screen and start playing.
- When a JPEG disc is inserted, folders and a file list are displayed.
- If you want the unit to play automatically when it is powered on with a disc in the unit, power on with the PLAY button.

4 **Press the STOP button to stop playback.**

NOTE

- When you stop disc play, the recorder remembers where you stopped. When you press PLAY button again, it will pick up where you left off. (unless the disc is removed or the recorder is unplugged, or if you do not press the STOP button twice.) This function is only applicable to DVD-VIDEO, DVD-RAM, DVD-RW, DVD-R or audio CDs (CD-DA).

CAUTION

- Do not move your DVD recorder while playing, as this may cause damage to the disc.
- Make sure to press the OPEN/CLOSE button to open or close the disc tray.
- Do not push the disc tray while it is being opened or closed, as this may cause a product malfunction.
- Do not place foreign materials on or in the disc tray.
- Some functions may perform differently or be disabled depending on the disc type. If this occurs, refer to the instructions written on the disc case.
- Be especially careful that children's fingers are not caught between the disc tray and the tray chassis when it closes.
- You must only insert one DVD disc at a time. Inserting two or more discs will not allow playback and may cause damage to the DVD player.

Using the Disc Menu & Title Menu

Some discs contain a dedicated menu system that allow you to select special functions for the title, such as chapters, audio track, subtitles, film previews, information on characters, etc.

For DVD-VIDEO discs

1 **Press the DISC MENU button to enter the disc menu of the disc.**

- Move to the setup menu related to the playback operation.
- You can select the audio language and the subtitles provided by the disc.

2 **Press the TITLE MENU button to move to the title menu of the disc.**

- Use this button if the disc contains more than one title. Some type of discs may not support the title menu function.

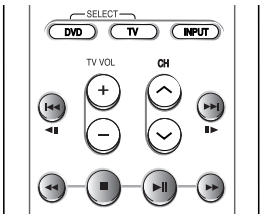
For DVD-RAM/RW/R discs

1 **Press the TITLE LIST button to move to the Title List.**

NOTE

- **Title List**: Title List shows a list to help you select a title. Since the title list consists of the information on video that is actually recorded, if one title is deleted, that title cannot be played again.
- **Play List**: This refers to a unit of playback, which is made by selecting a desired scene in the entire Title List. When one playlist is played, only the scene selected by the user will play and then stop. Since only the information necessary for playing a desired scene is included in a playlist, even if that playlist is deleted, the original recording will not be deleted.

Using the Search Functions



Searching through a Chapter or Track

1 **During play, press the ⏪ ⏩ button on the remote control.**

DVD-VIDEO/ DVD-RAM/ DVD-RW/DVD-R	▶▶ Fast X 2 → ▶▶ Fast X 4 → ▶▶ Fast X 8 → ▶▶ Fast X 16 → ▶▶ Fast X 32 → ▶▶ Fast X 128 → Fast X 2
AUDIO CD(CDDA)	▶▶ Fast X 2 → ▶▶ Fast X 4 → ▶▶ Fast X 8 → Fast X 2

- You can scan the program in reverse.
  To return to normal speed playback, press the ⏯ button.
- When you press and hold the SEARCH button(⏪ ⏩), playback is done at the default speed of 4X. If you release the SEARCH button, playback is performed at a normal speed.
- The speed marked in this function may be different from the actual playback speed.

NOTE

- No sound is heard during Scan(Search) mode, except CDs (CD-DA).

Searching Chapters or Tracks

- During play, you can search quickly through a chapter or track.

1 During play, press the ⏮ ⏭ button on the remote control.

- If you press the ⏮ button,
  it moves to the beginning of the chapter or track or marker(DVD-RAM, DVD-RW(VR mode)).
  Pressing the button once again within 3 seconds returns to the beginning of the previous chapter or track or marker(DVD-RAM, DVD-RW(VR mode)).
- If you press the ⏭ button,
  it moves to the next chapter or track or marker(DVD-RAM,DVD-RW(VR mode)).

Slow Motion Play

DVD-VIDEO DVD-RAM DVD-RW DVD-R

1 In pause or step mode, press the ⏪ ⏩ button on the remote control.

- If you press the ⏩ button,
  ▶ Slow 1/8 → ▶ Slow 1/4 → ▶ Slow 1/2 ▶
- If you press the ⏪ button,
  ◀ Slow 1/8 → ◀ Slow 1/4 → ◀ Slow 1/2 ◀
- To return to normal speed playback, press the ⏯ button.

Press and hold the ⏪ ⏩ button during pause, and the disc will play slowly at a 1/4 speed. If the button is released, the pause operation will resume.

NOTE

- The speed marked in this function may be different from the actual playback speed.

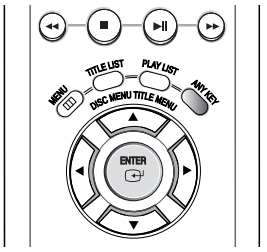
Step Motion Play

DVD-VIDEO DVD-RAM DVD-RW DVD-R

1 Press the ⏮ ⏭ button on the remote control in the still mode.

- Each time the button is pressed, a new frame will appear.
  When ⏮ is pressed, the previous frame will be activated.
  When ⏭ is pressed, the next frame will be activated.
- To return to normal speed playback, press the ⏯ button.

About ANYKEY



The ANYKEY function allows you to easily search for a desired scene by accessing title, chapter, track, and time. You can also change the subtitle and audio settings and set some features including Repeat, Angle, and Zoom.

Moving to a scene directly using the ANYKEY

- If you want to move to a title, a chapter or a track to find a desired scene.

DVD-VIDEO DVD-RAM DVD-RW DVD-R

1 Press the ANY KEY button during playback.

2 Press the ▲▼ buttons to select the Title, Chapter or Track.

3 Press the ◀ ▶ buttons or number (0~9) buttons to select the desired scene. Then, press the ENTER button.

● If you want to move to a desired time to help you find a scene.

1 Press the ANY KEY button during playback.

2 Press the ▲▼ buttons to select the Time.

3 Enter the time in the sequence of hours, minutes, and seconds using the number buttons and then press the ENTER button.

NOTE

- This may not work for some discs. When an audio CD(CD-DA) or an MP3 disc is inserted, according to a disc type, the information display may not be appear.
- The Time Search function does not operate in some discs.
- To make the screen disappear, press the ANY KEY again

Using the Repeat Function

Playing Repeatedly(Repeat Playback)

DVD-VIDEO DVD-RAM DVD-RW DVD-R

Using the REPEAT button

1 Press the REPEAT button during playback.

2 Press the REPEAT button or press the ▲▼ buttons to select the Title or Chapter you want to play repeatedly.
Press the ENTER button.

Chapter : Repeats the chapter that is playing.
Title : Repeats the title that is playing.

- To return to normal playback -

3 Press the REPEAT button and select Off by using ▲▼ or REPEAT button.
Press the ENTER or CANCEL button to return to normal playback.

Using the ANY KEY button

1 Press the ANY KEY button during playback.

2 Press the ▲▼ buttons to select Repeat and press the ◄► buttons to select the Title or Chapter you want to play repeatedly.

3 Press the ENTER button.
To make the screen disappear, press the ANY KEY or RETURN button.

NOTE

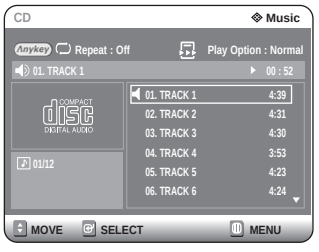
- DVD-RAM, DVD-RW(VR mode), unfinalized DVD-R and unfinalized DVD-RW (Video mode) do not repeat a chapter.

Playing Repeatedly(Repeat Playback)

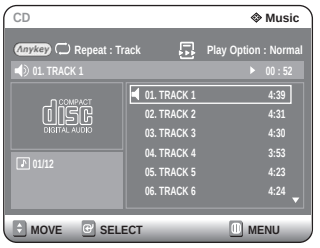
CD MP3

Using the REPEAT button

1 Press the REPEAT button during playback.



2 Press the REPEAT button repeatedly to select the “Track or Disc” you want to play repeatedly.

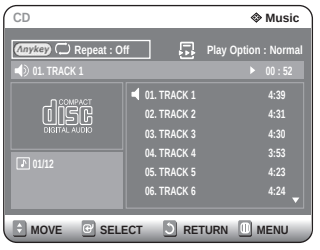


To return to normal playback

3 Press the REPEAT button repeatedly to select Off.
Press the CANCEL button to return to normal playback.

Using the ANY KEY button

1 Press the ANY KEY button during playback. Repeat is highlighted.



2 Press the REPEAT button or ▲▼ buttons to select the Track or Disc you want to play repeatedly. Press the ENTER button.
For MP3 discs, you can select Track, Folder or Disc.

- To return to normal playback -

4 Press the REPEAT button repeatedly to select Off.
Press the CANCEL button to return to normal playback.

Playing a Certain section Repeatedly(A-B Repeat Playback)

DVD-VIDEO DVD-RAM DVD-RW DVD-R

ANYKEY Using the ANY KEY button

1 Press the ANY KEY button during playback.

2 Press the ▲▼ buttons to select Repeat and press the ▶ button to select the A-B.

3 Press the ENTER button.

4 Press the ENTER button at the point where you want the repeat play to start (A) and press it again at the point where you want the repeat play to stop (B).
Repeat playback of the A-B section starts.

NOTE

- If you set point (B) before five seconds has lapsed, the prohibition mark (⊘) will appear.
- You can also activate Normal Playback by pressing the Cancel button.
- Audio CDs(CDDA) and MP3 discs do not support the Repeat A-B function.

Selecting the Subtitle

Subtitle languages may not work depending on the disc type. This is only available during playback.

DVD-VIDEO DVD-RAM DVD-RW (VR mode)

Using the SUBTITLE button

1 Press the SUBTITLE button during playback.

2 Press the SUBTITLE button or ▲▼ buttons to select the desired subtitle language.
To make the screen disappear, press the CANCEL or RETURN button.

ANYKEY Using the ANY KEY button

1 Press the ANY KEY button during playback.

2 Press the ▲▼ buttons to select Subtitle and press the ◀ ▶ buttons to select the desired subtitle language.

NOTE

- The subtitle display may be different depending on the disc type.
- If the subtitles overlap, disable the caption function on your TV.
- Some discs allow you to select the language for the disc menu only.

Selecting the Audio language

Audio languages may not work depending on the disc type. This is only available during playback.

DVD-VIDEO DVD-RAM DVD-RW (VR mode)

Using the AUDIO button

1 Press the AUDIO button during playback.

2 Press the AUDIO button or ▲▼ buttons to select the desired audio language.

Using the ANY KEY button

1 Press the ANY KEY button during playback.

2 Press the ▲▼ buttons to select Audio and press the ◄► buttons to select the desired audio language.

NOTE

- Audio languages may be different because they are disc-specific.
- Some discs allow you to select the audio language for the disc menu only.

Changing the Camera Angle

When a DVD-VIDEO contains multiple angles of a particular scene, you can select the Angle function. This is only available during playback.
If the disc contains multiple angles, the ANGLE mark appears on the screen.

1 Press the ANY KEY button during playback.

2 Press the ▲▼ buttons to select Angle and press the ◄► buttons or number(0~9) buttons to select the desired angle.

NOTE

- This function is disc-dependent, and may not work all DVDs.
- This function does not work when a DVD has not been recorded with a multi-camera angle system.

Zooming-In

DVD-VIDEO DVD-RAM DVD-RW DVD-R

1 Press the ANY KEY button during playback or pause.

2 Press the ▲▼ buttons to select Zoom, and then press the ENTER button. ( ) will be displayed.

3 Press the ▲▼ ◄► buttons to move to the area you want to enlarge.

4 Press the ENTER button. The screen will be enlarged to twice the normal size.
If you press the ENTER button again after the screen was enlarged to twice the normal size, the screen size will be enlarged to four times the normal size.

normal size 2X → 4X → 2X

NOTE

- When the recording is done in EP mode, the Zoom function is not supported except when the recording has been done in V mode.

Using Bookmarks

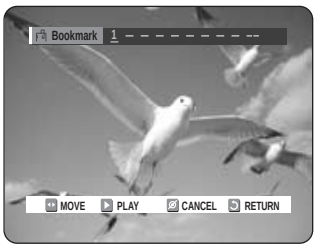
This feature lets you bookmark sections of a DVD or DVD-R/-RW(V mode), so you can quickly find them.

Bookmarking with a DVD-Video/DVD-RW(Video mode)/DVD-R disc

DVD-VIDEO DVD-RW DVD-R
(V mode)

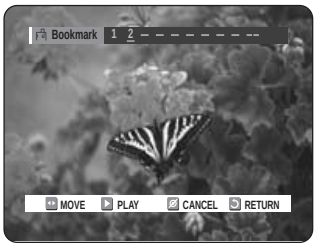
1 Press the MARKER button during playback.

2 Press the ENTER button when the desired scene appears.
The number 1 is displayed and the scene is memorized.



3 Press the ◄► button to move to the next position.

4 Press the ENTER button when the desired scene appears.
The number 2 is displayed and the scene is memorized.



- Repeat above to bookmark other positions.
- You can bookmark up to 10 scenes.

NOTE

- When the disc tray is opened and then closed, bookmarks will disappear.

Playback

Playing Back a Bookmark

1 Press the MARKER button during playback.

2 Press the ◄► buttons to select a bookmarked scene.

3 Press the ENTER or ⏯ button to start playing from the selected scene.

Clearing a Bookmark

1 Press the MARKER button during playback.

2 Press the ◄► buttons to select a bookmarked scene.

3 Press the CANCEL button to delete the selected bookmark.

Using Markers

Marking with a DVD-RAM/DVD-RW(VR mode) disc

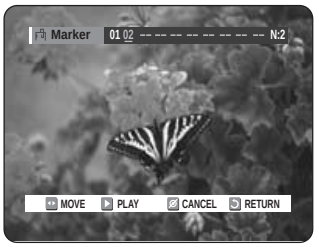
DVD-RAM DVD-RW (VR mode)

1 Press the MARKER button during playback.

2 Press the ENTER button when the desired scene appears.
The number 01 is displayed and the scene is memorized.

3 Press the ◄► button to move to the next position.

4 Press the ENTER button when the desired scene appears.
The number 02 is displayed and the scene is memorized.



- DVD-RAM or DVD-RW (VR Mode) discs have the Marker function instead of the Bookmark function. The Marker function allows you to mark up to 99 scenes. Since the scenes may be displayed as many different pages, numbering is necessary. If a disc in use is encoded with Disc Protect, Markers cannot be set or deleted. Only playback is available.

Playing Back a Marker

1 Press the MARKER button during playback.

2 Press the ◀ ▶ buttons to select a bookmarked scene.

3 Press the ENTER or ⏯ button to start playing from the selected scene.

- If you press the ⏮ button, it moves to the beginning of the marker. Pressing the button once again within 3 seconds returns to the beginning of the previous marker.
- If you press the ⏭ button, it moves to the next marker.

Clearing a Marker

1 Press the MARKER button during playback.

2 Press the ◀ ▶ buttons to select a bookmarked scene.
Press the CANCEL button to delete the selected bookmark.

- When a marker is cleared while DVD-RAM/-RW (VR mode) is playing, marker numbers will change. For example, if the 7th marker is cleared after ten markers are registered, the marker numbers after the eighth will automatically move ahead by one and the 8th marker becomes the 7th.

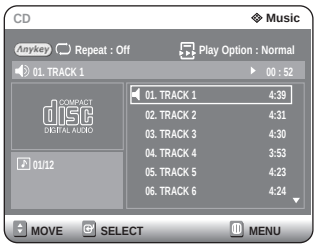
Playing an Audio CD/MP3

Playing an Audio CD (CD-DA)/MP3

Each disc has a variety of menu functions available.

Playing an Audio CD(CD-DA)

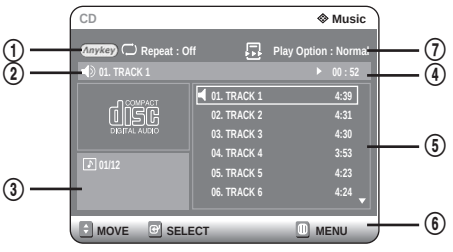
1 Insert an audio CD (CD-DA) into the disc tray.
The audio CD menu appears and the tracks (songs) are played automatically.



2-1 Press the ▲▼ buttons to select the track you want to hear, and then press the ENTER button or ▶ button.

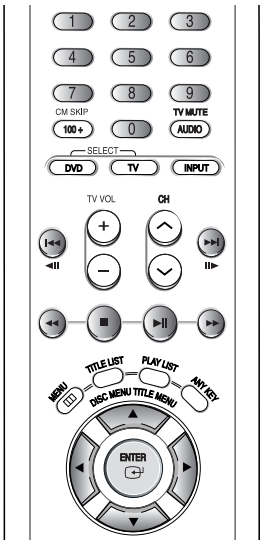
2-2 Press the number buttons to select the track (song) and the track (song) is played automatically.

Audio CD(CD-DA) Screen Elements



1. **Repeat mode:** Repeat off/Repeat Track/Repeat Disc
2. **Current track (song):** Displays the number of the track currently being played.
3. Displays the current play index and total track number.
4. This shows the operating state of a disc and a playback time corresponding to a portion that is currently played.
5. Displays the track list (song list) and the playing time of each track.
6. Button display.
7. **Play Option:** Normal, Random, Intro or Playlist

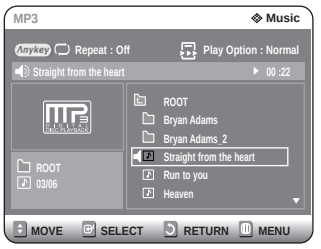
Buttons on the Remote Control used for MP3 playback



1. ▲▼, **0~9**: Selects a track (song).
2. ▶ : Plays the selected track (song).
3. **ENTER button**: Plays the selected track (song).
4. (⏭) **button**: Plays the next track.
5. (⏮) **button**: Returns to the beginning of the current track when pressed during playback. If pressed again, your DVD recorder moves to and plays the previous track.
   If you press this button within three seconds after playback starts, the previous track will be played.
   If you press this button after three seconds, the current track will be replayed from the beginning.
6. **Press the (⏮ / ⏭) button**: Fast Play (X2, X4, X8)
7. ⏹ : Stops a track(song).
8. ⏯ : Plays a track(song) or pauses playback.
9. **ANYKEY**: To select the top menu on screen display (Repeat or Play Option).

Playing an MP3 Disc

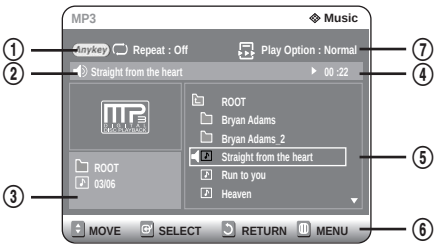
1 **Insert an MP3 Disc into the disc tray.**
The MP3 menu appears and the tracks(songs) are played automatically.



2-1 **Press the ▲▼ buttons to select the track (song) you want to hear, and then press the ENTER button or ▶ button.**

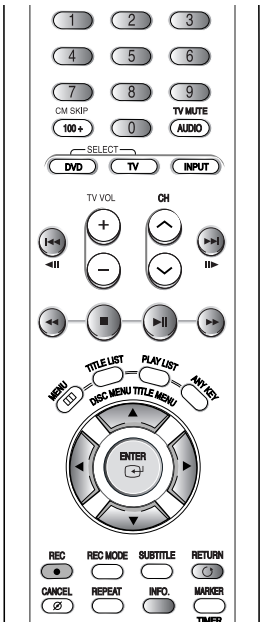
2-2 **Press the number buttons to select the track (song) and the track (song) is played automatically.**

MP3 Screen Elements



1. **Repeat mode**: Repeat off, Repeat Track, Repeat Folder or Repeat Disc
2. **Current track (song)**: Displays the name of the track being played.
3. Displays the current folder and play index.
4. This shows the operating state of a disc and a playback time corresponding to a portion that is currently played.
5. Displays the information for the folder and its tracks.
6. Button display.
7. **Play Option** : Normal, Random, Intro or Playlist

Buttons on the Remote Control used for CD playback

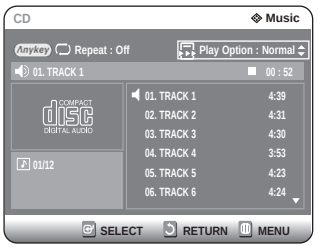


1. ▲▼,0~9: Selects a track (song).
2. ▶: Plays the selected track (song).
3. **ENTER( ) button:** Plays back the selected track (song) or displays the files in the selected folder.
4. **RETURN( ) button:** Moves to the folder to which the current song belongs.
5. ( ) **button:** Plays the next track.
6. ( ) **button:** Returns to the beginning of the current track when pressed while playing. If pressed again, your DVD recorder moves to and plays the previous track.
   If you press this button within three seconds, the previous track will be played.
   If you press this button after three seconds, the current track will be replayed from the beginning.
7. : Stops a track(song).
8. : Plays a track(song) or pauses playback.
9. **ANYKEY:** To select the top menu on screen display (Repeat or Play Option).

Play Option Mode

The Play Option can be used with an audio CD in the Play or Stop mode.

1 **Press the ANY KEY button in the stop mode.**
Play Option will be highlighted.



- During Playback, Repeat Mode will be highlighted.

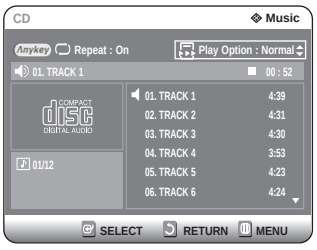
2 **Select a desired play option (Normal, Random, Intro or Playlist) using the ▲▼ buttons. Press the ENTER button.**

- **Normal:** Tracks on a disc are played in the order in which they were recorded on the disc.
- **Random:** The Random option plays a disc's tracks in random order. After a random list is generated and played completely, another random list is generated and played.
  Random Play is continued until the play option is changed.
- **Intro:** The first 10 seconds of each track will be played. If you want to listen to the music that you have selected, press the ENTER button or button. The play option will be changed to Normal Play. If you When Intro Play is completed, Normal Play is performed.
- **Playlist:** The Playlist playback option allows you to select the order in which you want tracks to play.

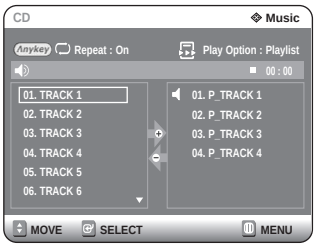
To Program Tracks

You can register a maximum of 30 tracks in the playlist.

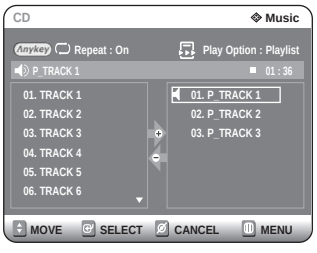
1 **Press the ANY KEY button in the stop mode.**
Play Option will be highlighted.



2 **Select Playlist using the ▲▼ buttons, and then press the ENTER button.**
The Playlist screen will appear.
Select tracks in the order in which you want them to play using the ▲▼ buttons.
Press the ENTER button.



3 **If you playlisted a wrong trank, press the ► button, then press the ▲▼buttons to select wrong track and press the CANCE button.**
The wrong track will be removed.



4 **Press the PLAY button to playback the playlist.**

Playing a Picture CD

There are two types of Picture CDs. One is a CD with only JPEG files. The other one is a CD with JPEG files and MP3 files.(mixed CD)

1. When a mixed CD is played, a menu will be shown in order to let have you choose which contents, either JPEG or MP3, you want to play.

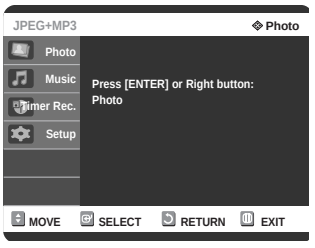
1-1. If you want to play MP3 files on a mixed CD, choose Music on the menu, then it will take you to the MP3 play back screen.

1-2. If you want to play JPEG files on a mixed CD, choose Photo on the menu, then it will take you to photo play back screen. See number 3 on the next page.

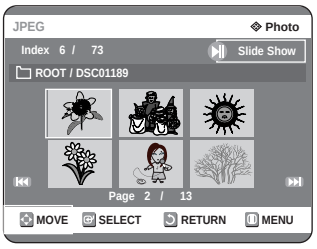
2. When a Picture CD(CD with only JPEG files) is played, the recorder will show the Album screen,with thumbnail images. See number 3 on the next page.

1 **Insert a Picture CD(JPEG only) or Mixed CD(JPEG + MP3)into the disc tray.**

2 **When playing a Mixed CD, press the ▲▼ buttons to select Photo and press the ENTER or ► button.** (When playing a Picture CD, see number 3 on the next page.)



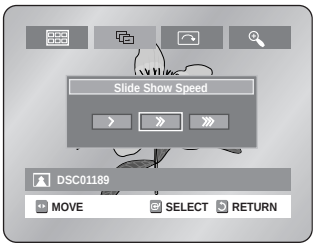
3 Press the ▲▼◄► buttons to select a picture.



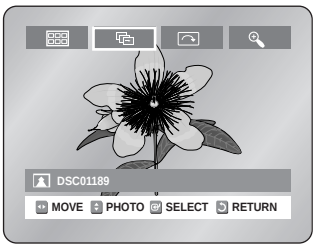
- To see the next 6 pictures, press the ⏭ button.
- To see the previous 6 pictures, press the ⏮ button.

4-1 If your press the PLAY(⏯) button, the Slide show screen will appear.

The picture interval (Slide show speed) must be set.



4-2 Use the ◄► buttons to select a picture file in Album screen and then press the ENTER button.



: Returns to the Album screen.

: The unit enters slide show mode. Before the slide show can begin, the picture interval (Slide show speed) must be set.

: Each time the ENTER button is pressed, the picture rotates 90 degrees clockwise.

: Each time the ENTER button is pressed, the picture is enlarged up to 4X. (Normal → 2X → 4X → 2X → Normal)

- Press the ANY KEY button to display or clear menus.

Playing the Title List

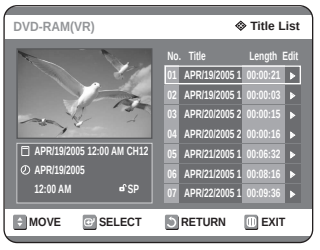
DVD-RAM DVD-RW DVD-R

Follow these instructions to play back a scene from the Title List.

Using the TITLE LIST button

1 Press the TITLE LIST button.

The Title List screen is displayed.



2 Press the ▲▼ buttons to select an entry you want to play from Title List, and then press the PLAY(⏯) button.

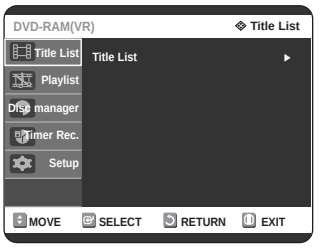
The selected entry (title) will be played back.

3 To stop title play, press the STOP button.

To return the title list screen, press the TITLE LIST button.

Using the MENU button

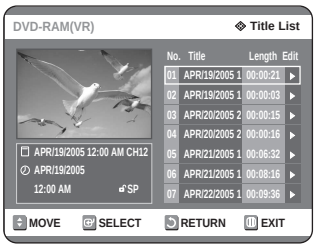
1 Press the MENU button.



Playback

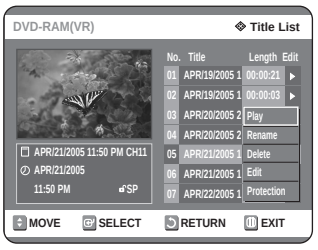
2 Press the ▲▼ buttons to select Title List, and then press the ENTER or ▶ button twice.

The Title List screen is displayed.



3 Press the ▲▼ buttons to select Title, and then press the ENTER or ▶ button.

The Edit menu is displayed on the right.

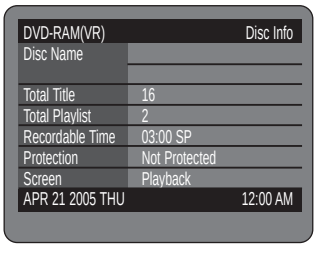


(Play, Rename, Delete, Edit, Protection : See pages 73~76)

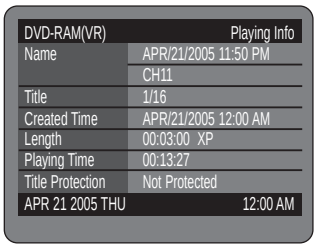
4 Press the ▲▼ buttons to select Play to play the title list and then press the ENTER button.

The selected entry (title) will be played back.

To view the current status of the disc and progress of playback : Press the INFO button, and the information about the disc will appear.



Press the INFO button once again. Then you can check the information about the title under playback.

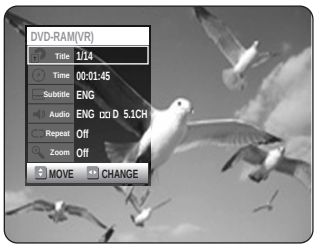


5 To stop title play, press the STOP button.

To return the title list screen, press the TITLE LIST button.

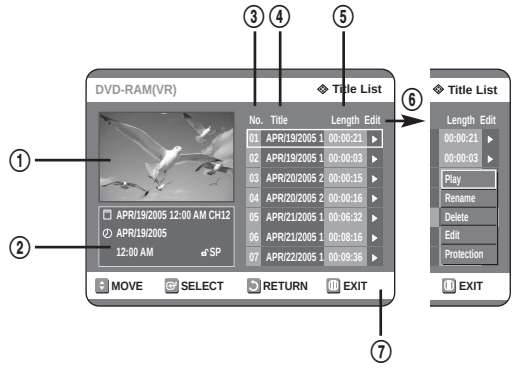
NOTE

- You can also play a recorded program by pressing the ANY KEY button during playback.



- Press the ▲▼ buttons to select Title.
- Press the ◀ ▶ or number buttons to select to play the title list and then press the ENTER button.

Title List Screen Elements



① Playback screen for recorded entries.
② Information window for the selected entry: Title name, recording date, recording time, lock status, recording mode
③ Recorded entry No.
④ Recorded entry title
⑤ Recording length (i.e., the playing time)
⑥ Title list edit items
Play: Plays the selected entry.
Rename: Renames the title of a selected entry.
Delete: Deletes the selected entry from the list.
Edit: Deletes a section.
Protection: Locks or unlocks the selected entry.
⑦ Button display.

NOTE

- This may depend on the the disc type.
- DVD-R/DVD-RW(Video) has limited editing function.

Settings & Adjustments

Using the Setup Menu 64
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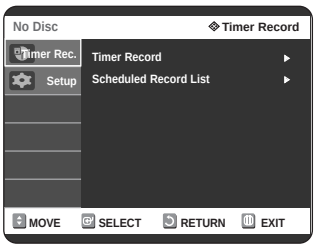
Parental Control.....69

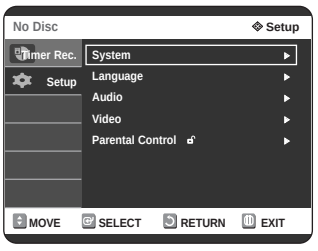
Using the Setup Menu

For ease of use, we recommend that you set up the initial settings before using the product.

1 **With the unit in Stop mode/No disc mode, press the MENU button on the remote control.**
Menu items differ depending on the disc type.



2 **Select Setup using the ▲▼ buttons, then press the ENTER or ▶ button.**
Setup menu will be displayed.



- **System Setting**
  Setup of the General Options.
  - Clock Set, Channel Set, CM Skip Time, EP Mode Time, Chapter Creator
- **Language Setting**
  Setup of the Language Options.
  - Audio, Subtitle, Disc Menu, On-Screen Menu
- **Audio Setting**
  Setup of the Audio Options
  - Digital Output , DTS, Dynamic Compression
- **Video Setting**
  Setup of the Display Options. Use to select which type of screen you want to watch and several display options.
  - TV Aspect, Input Level, Black Level, 3D Noise Reduction, Front Display
- **Parental Control**
  Setup of the Parental Level
  Allows users to set the level necessary to prevent children from viewing unsuitable movies such as those with violence, adult subject matter, etc.
  - Password, Rating Level,Change Password

System Setting

Clock Set

(See page 29)

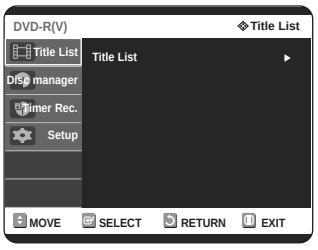
Channel Set

(See page 31)

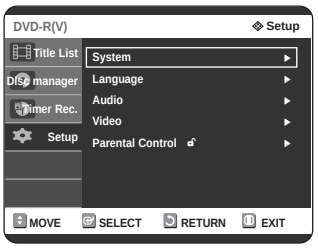
CM Skip Time Setting

When a program recorded on a DVD-RAM, a DVD-RW, or a DVD-R is played, the unit can be set to automatically skip a portion of the program corresponding to a CM(commercial) Skip Time set by the user.

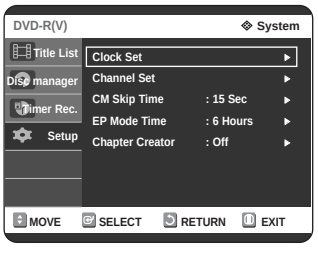
1 With a disc inserted and the unit in Stop mode, press the MENU button on the remote control.



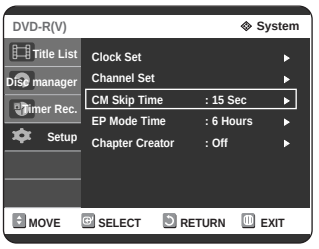
2 Select Setup using the ▲▼ buttons, then press the ENTER or ▶ button.
You can't use the Setup functions while playing a disc.



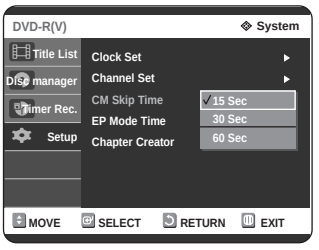
3 Select System using the ▲▼ buttons, then press the ENTER or ▶ button.
System menu will be displayed.



4 Select CM Skip Time using the ▲▼ buttons, then press the ENTER or ▶ button.
CM Skip Time will be displayed.



5 Select the desired time using the ▲▼ buttons, then press the ENTER or ▶ button.



6 If you press the CM SKIP button during playback, the section corresponding to the set time is skipped, and then the next section is played.

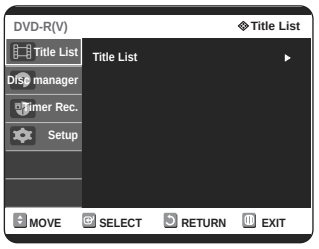
NOTE

- CM Skip can be performed only during normal playback.
- When the time set is less than a remaining time of a current title: The next title is played from the beginning.
- When the time set is less than a remaining time of a play list, the next scene is played.
- CM Skip does not work in a still picture mode.
- When a set time is less than a remaining time of a scene, a last title, or a last track that is displayed currently, a prohibition mark appears.
- CM Skip releases Repeat (including Repeat A-B, Chapter, and Title).
- CM Skip may not operate with some DVD-Video discs.

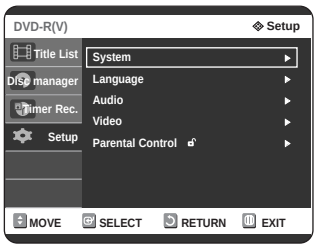
EP Mode Time Setting

You can set the EP (Extended Play) mode's time setting to 6 or 8 hours.

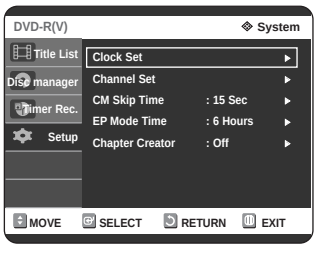
1 With a disc inserted and the unit in Stop mode, press the MENU button on the remote control.



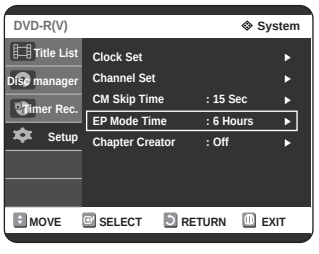
2 Select Setup using the ▲▼ buttons, then press the ENTER or ▶ button.
You can't use the Setup functions while playing a disc.



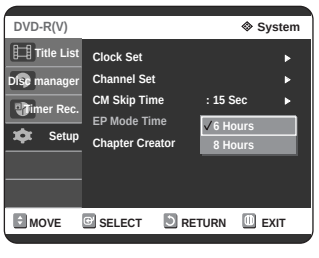
3 Select System using the ▲▼ buttons, then press the ENTER or ▶ button.
System menu will be displayed.



4 Select EP Mode Time using the ▲▼ buttons, then press the ENTER or ▶ button.
EP Mode Time will be displayed.



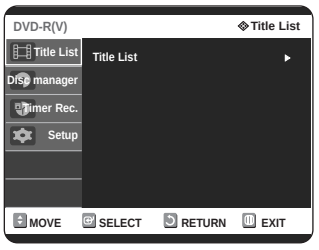
5 Select the desired time using the ▲▼ buttons, then press the ENTER or ▶ button.



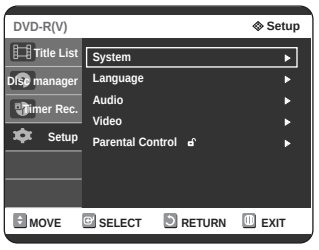
Automatic Chapter Creation

This function only works for DVD-RW (Video) and DVD-R discs.

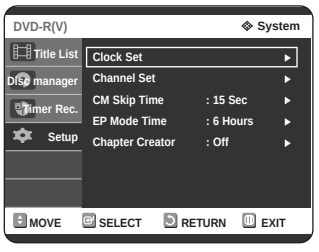
1 With a disc inserted and the unit in Stop mode, press the MENU button on the remote control.



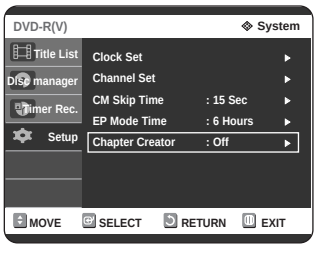
2 Select Setup using the ▲▼ buttons, then press the ENTER or ▶ button.
You can't use the Setup functions while playing a disc.



3 Select System using the ▲▼ buttons, then press the ENTER or ▶ button.
System menu will be displayed.

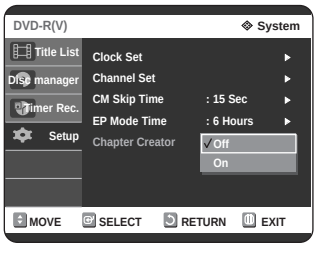


4 Select Chapter Creator using the ▲▼ buttons, then press the ENTER or ▶ button.
Chapter Creator will be displayed.



5 Press the ENTER or ▶ button, and then select On using the ▲▼ buttons.

- **Off:** Select this option when you do not want to make the chapter menu.
- **On:** Select this option when you want to make the chapter menu.



NOTE

- Set the chapter creator to on and then start recording. Stopping the recording will automatically create a chapter menu.
- This function only works for normal recording.
  - After the recording has begun, the “Do you want to create the chapter menu after this recording?” message appears for 10 seconds. Select “Yes” or “No”.
  - Selecting “Yes” will create a new chapter menu while selecting “No” will not.
  - A new chapter is created according to the selected recording mode. A chapter will be about 5 minutes long in XP and SP, and about 15 minutes long in LP and EP mode.
- To display the created chapters, finalize the disc and then press the DISC MENU button. The chapters menu appears.

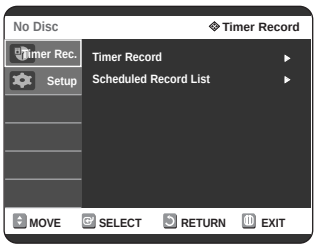
CAUTION

- The Automatic Chapter Creation function does not work during Timer Recording or when you turn the power off.

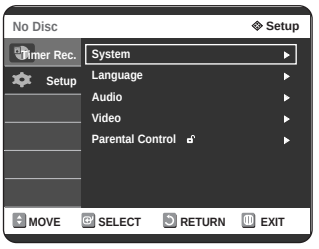
Language Setting

If you set the On-Screen menu, disc menu, audio and subtitle language in advance, they will come up automatically every time you watch a movie.
If the selected language is not recorded on the disc, the original pre-recorded language is selected.

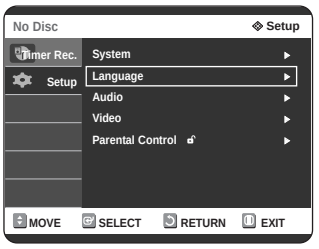
1 With the unit in Stop mode/No Disc mode, press the MENU button on the remote control.

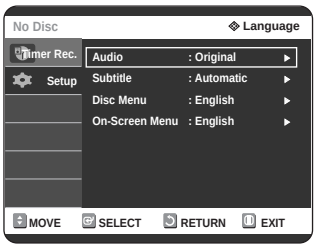


2 Select Setup using the ▲▼ buttons, then press the ENTER or ▶ button.



3 Select Language using the ▲▼ buttons, then press the ENTER or ▶ button.
Language setup menu will be displayed.

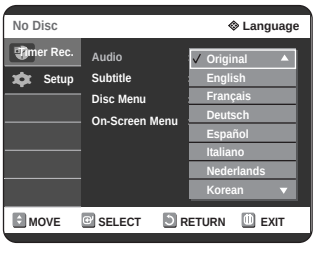




4 Use the ▲▼ buttons to select the desired sub menu and press the ENTER or ▶ button.

- **Audio Language:** For the disc audio language.
- **Subtitle Language:** For the disc subtitles.
- **Disc Menu Language:** For the disc menu contained on the disc
- **On-Screen Menu Language:** For the player menu of your DVD recorder

5 Select the desired Language using the ▲▼ buttons, then press the ENTER or ▶ button.



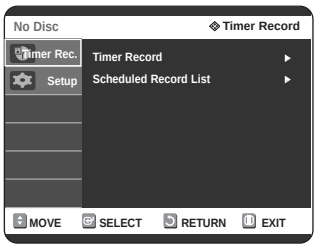
NOTE

- Press the RETURN or ◀ button to return to the previous menu.
  Press the MENU button to exit the menu.
- The selected language will only appear if it is supported on the disc.

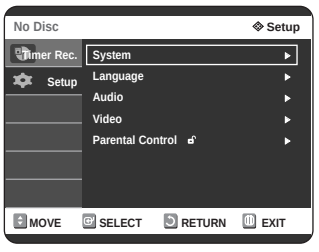
Video (Display) Setting

This allows you to set up the TV screen settings.

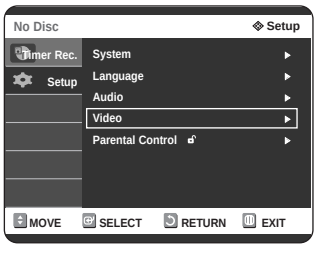
1 With the unit in Stop mode/No Disc mode, press the MENU button on the remote control.

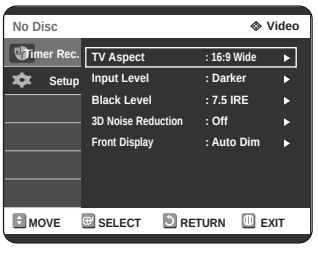


2 Select Setup using the ▲▼ buttons, then press the ENTER or ▶ button.



3 Select Video using the ▲▼ buttons, then press the ENTER or ▶ button.
Video option menu will be displayed.



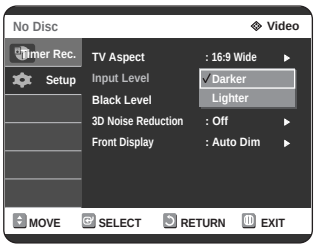


4 Select the sub menu(TV Aspect,…,3D Noise Reduction) using the ▲▼ buttons, then press the ENTER or ▶ button.

TV Aspect: see page 35

Input Level

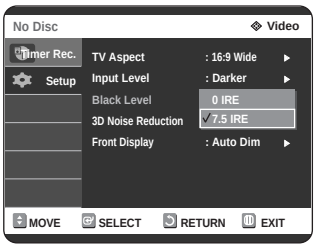
Adjusts the level of the input signal.



- Darker : If you feel the screen is too light and you want to make the screen darker.
- Lighter : If you feel the screen is too dark and you want to make the screen lighter.

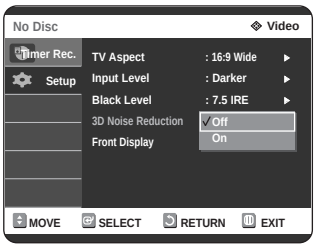
Black Level

Adjusts the black level of the screen.



- 0 IRE : Select this when you want darker screen.
- 7.5 IRE : Select this when you want lighter screen.

3D Noise Reduction (motion adaptive noise reduction)



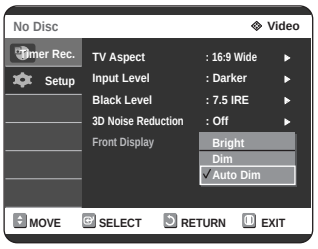
- On : Provides a cleaner picture through noise reduction (for recording).
- Off : Normal

NOTE

- Black level function is not available in the progressive scan mode.

Front Display

Adjust the brightness of the unit's front panel display.



- Bright : Makes the Front Panel Display bright.
- Dim : Makes the Front Panel Display dim.
- Auto Dim : Makes the Front Panel Display dim automatically when playing a DVD.

5 Use the ▲▼ buttons to select the desired item. Then press the ENTER or ▶ button.

NOTE

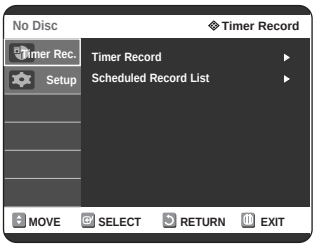
- Press the RETURN or ◀ button to return to the previous menu.
  Press the MENU button to exit the menu.
- IRE: Short for the Institute of Radio Engineers. An IRE unit is a relative unit of measure equaling 1/140th of the peak-to-peak (p-p) video amplitude.

Parental Control

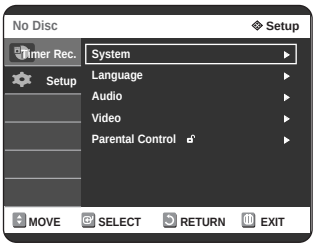
The Parental Control function works in conjunction with DVDs that have been assigned a rating - which helps you control the types of DVDs that your family watches. There are up to 8 rating levels on a disc.

DVD-VIDEO

1 With the unit in Stop mode/No Disc mode, press the MENU button on the remote control.

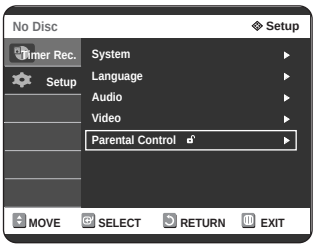


2 Select Setup using the ▲▼ buttons, then press the ENTER or ▶ button.

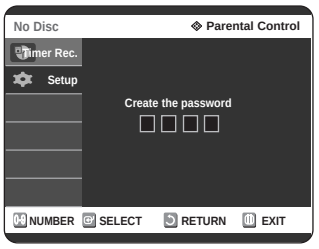


3 Select Parental Control using the ▲▼ buttons, then press the ENTER or ▶ button.

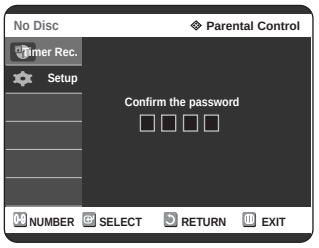
When you operate your DVD recorder for the first time, the 'Create the Password' message will be displayed.



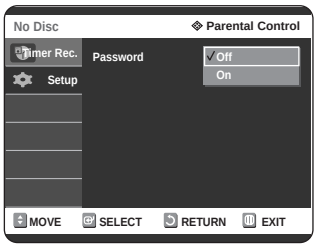
4 Create a 4-digit password using the 0 to 9 buttons on the remote control.



5 The Re-enter Password screen appears to confirm the password. Enter your password again.



6 Press the ENTER or ▶ button, and then select On using the ▲▼ buttons.
The Parental Control screen appears.

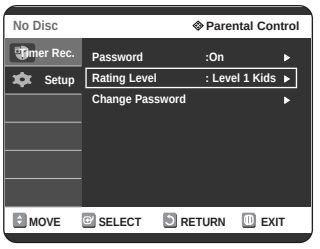


NOTE

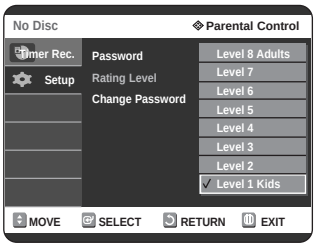
- Press the RETURN or ◀ button to return to the previous menu.
  Press the MENU button to exit the menu.

About the Rating Level

1 Select Rating Level using the ▲▼ buttons.



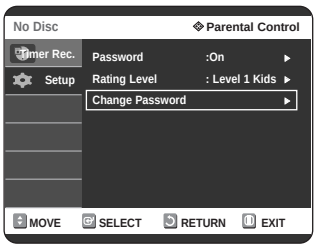
2 Press the ENTER or ▶ button.
The rating level will be displayed.



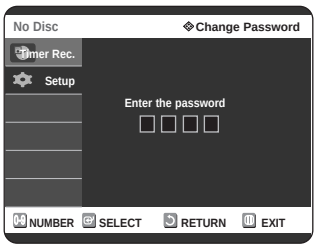
3 Select Rating Level you want using the ▲▼ buttons, then press the ENTER or ▶ button.
For example, if you select up to Level 6, discs that contain Level 7, 8 will not play. A larger number indicates that the program is intended for adult use only.

Changing the Password

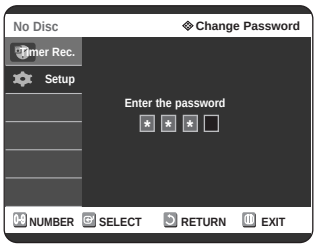
1 Select Change Password using the ▲▼ buttons.



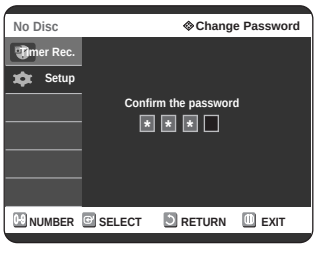
2 Press the ENTER or ▶ button.
The 'Enter the password.' message will be displayed.



3 Enter the 4-digit password using the 0 to 9 buttons on the remote control.



4 The 'Confirm the password.' message will be displayed.
Enter your password again using the 0 to 9 buttons on the remote control.



NOTE

- See page 93 if you forgot your password.

Editing

This section introduces basic functions of DVD editing and explains both edit functions for the recording on a disc and edit functions for the entire disc.

Basic Editing (Title List).....73
Advance Editing (Play List) 77
Disc Manager.....85

- **Title List**
  A title is a section of recorded video and audio. Title List shows a list to help you select a title. Since the title list consists of the information on stream that is actually recorded, if one title is deleted, that title cannot be played again.
- **Play List**
  This refers to a unit of playback, which is made by selecting a desired scene in the entire Title List. When one playlist is played, only the scene selected by the user will play and then stop. Since only the information necessary for playing a desired scene is included in a playlist, even if that playlist is deleted, the original stream will not be deleted.

Recording or editing might not be completed if an error, such as a sudden power failure occurs.

Please be aware that a material that has been damaged is unable to be retrieved to its original content.

Basic Editing (Title List)

Renaming(Labeling) a Title

Follow these instructions to rename a title list entry, i.e., to edit the title of a recorded program.

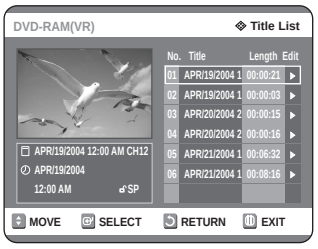
DVD-RAM DVD-RW DVD-R

Using the TITLE LIST button

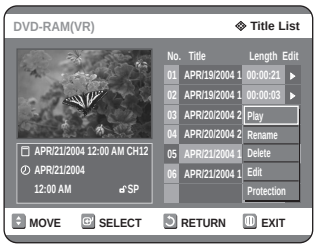
1 **Press the TITLE LIST button.**
The Title List screen is displayed

Using the MENU button

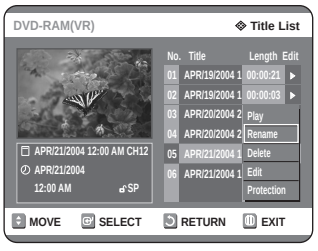
- Press the MENU button.
- Press the ▲▼ buttons to select Title List, then press the ENTER or ▶ button twice.

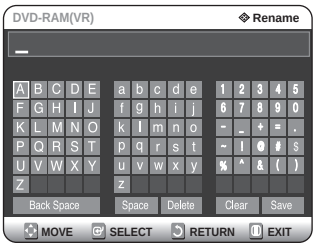


2 **Press the ▲▼ buttons to select an entry you want to rename from the Title List, and then press the ENTER or ▶ button.**

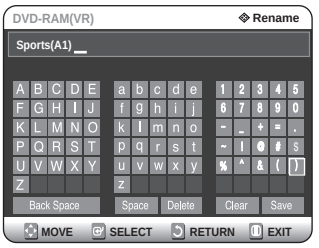


3 **Press the ▲▼ buttons to select Rename, and then press the ENTER or ▶ button.**
The Rename screen is displayed.



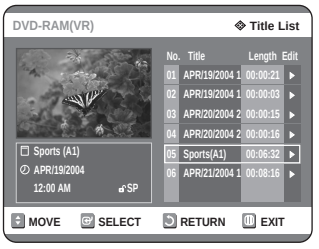


4 **Select the desired characters using the ▲▼◀▶ buttons, press the ENTER button.**



- **Back Space:** Moves the cursor one position backwards.(Equivalent to the CANCEL button)
- **Space:** Enters a blank and moves the cursor one forward (to the right).
- **Delete:** Deletes the character at the cursor position.
- **Clear:** Deletes all the character inputs.
- **Save:** Registers the character inputs.

5 **Press the ▲▼◀▶ buttons to select Save, and then press the ENTER button.**
The changed title name is displayed on the title item of the selected entry.



Locking(Protecting) a Title

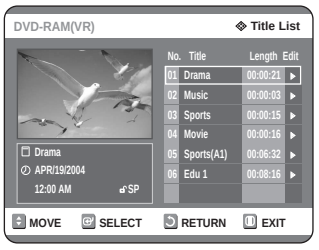
Follow these instructions to lock an entry to protect it from accidental deletion.

DVD-RAM DVD-RW DVD-R

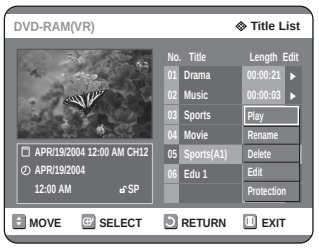
Using the TITLE LIST button

1 Press the TITLE LIST button.
The Title List screen is displayed

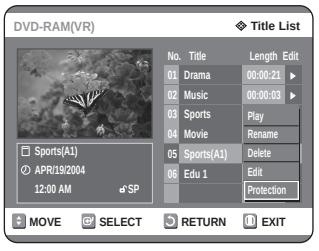
Using the MENU button
- Press the MENU button.
- Press the ▲▼ buttons to select Title List, and then press the ENTER or ▶ button twice.

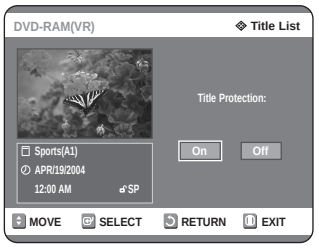


2 Press the ▲▼ buttons to select an entry you want to protect in the Title List, and then press the ENTER or ▶ button.

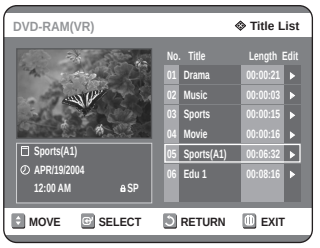


3 Press the ▲▼ buttons to select Protection, and then press the ENTER or ▶ button.





4 Press the ◀ ▶ buttons to select On, and then press the ENTER button. The key icon on the information window for the selected entry changes to the locked status. (🔓→🔒)



Deleting a Title

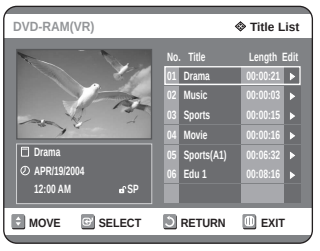
Follow these instructions to delete an entry from the Title List.

DVD-RAM DVD-RW DVD-R

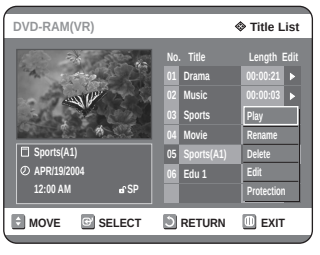
Using the TITLE LIST button

1 Press the TITLE LIST button.
The Title List screen is displayed

Using the MENU button
- Press the MENU button.
- Press the ▲▼ buttons to select Title List, and then press the ENTER or ▶ button twice.

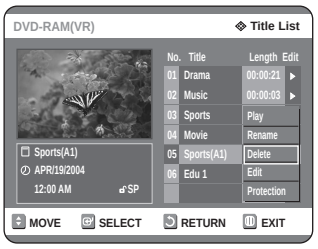


2 Press the ▲▼ buttons to select an entry you want to delete in the Title List, and then press the ENTER or ▶ button.

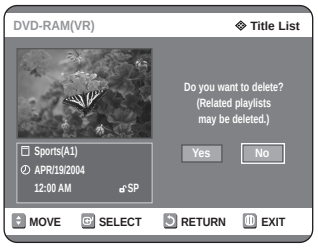


Editing

3 Press the ▲▼ buttons to select Delete, and then press the ENTER or ▶ button.



You will be prompted with the confirmation message.
DVD-RAM(VR), DVD-RW(VR mode): Since Playlist is present, the message 'Do you want to delete?(Related playlists may be deleted.)' is displayed.



DVD-RW(Video mode), DVD-R: Since Playlist is not present, the message 'Do you want to delete?' is displayed.

- The message may depend on the type of disc.

4 Press the ◀▶ buttons to select Yes, and then press the ENTER button.

NOTE

- You cannot delete a protected entry. If you want to delete a protected entry, select "Off" in the Title Protection menu.
- Once an entry is deleted from the Title List it cannot be recovered.
- Once DVD-R, DVD-RW is finalized, it cannot be deleted.
- With DVD-R, titles are only deleted from the menu, however, the Title remains physically on the disc.

Deleting a Section of a Title

Follow these instructions to delete a section of a Title List entry.

DVD-RAM DVD-RW (VR mode)

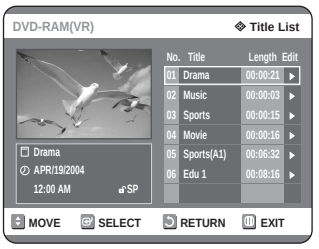
Using the TITLE LIST button

1 Press the TITLE LIST button.

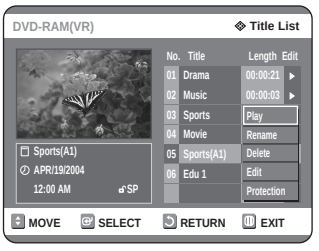
The Title List screen is displayed

Using the MENU button

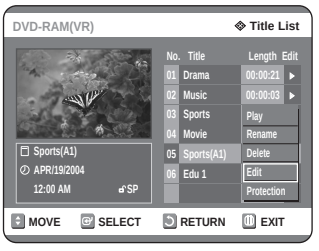
- Press the MENU button.
- Press the ▲▼ buttons to select Title List, and then press the ENTER or ▶ button twice.



2 Press the ▲▼ buttons to select an entry you want to edit from the Title List, and then press the ENTER or ▶ button.

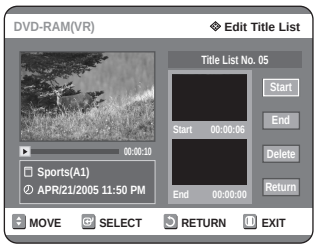


3 Press the ▲▼ buttons to select Edit, and then press the ENTER or ▶ button.

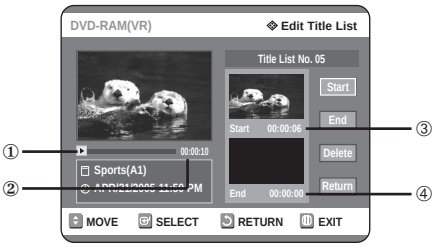


4 Press the ENTER button at the starting point.

The image and starting point time are displayed in the section deletion starting point window.



Edit Title List Screen Elements

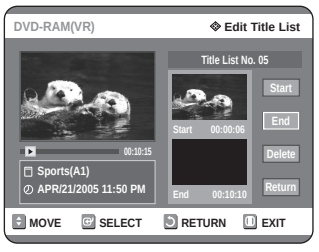


1 Playback bar
2 Playtime
3 Section deletion starting point window and time
4 Section deletion end point window and time

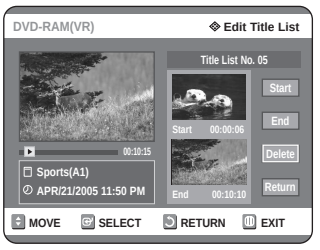
- Select the start and end points of the section you want to delete using the playback related buttons.
- Playback related buttons: (, , , ,).

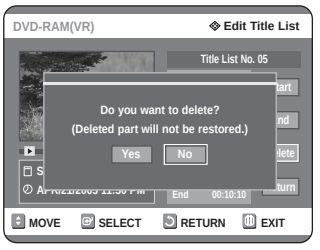
5 Press the ENTER button at the end point.

The image and end point time are displayed in the Section deletion ending point window.



6 Press the ▲▼ buttons to select Delete, and then press the ENTER button.





7 Press ◄► buttons to select Yes and the Press the ENTER button.

The selected section has been deleted.
To return to the Title List screen, press the ▲▼ buttons to select Return.

NOTE

- The length of the section to be deleted must be at least 5 seconds long.
- If the length of the section to be deleted is less than 5 seconds, you will be prompted with the message 'The range is too short.'.
- If the end time precedes the starting point, you will be prompted with the message 'End point cannot be marked earlier than start point'.
- The section cannot be deleted when it includes a still picture.
- Press the MENU button after the operation has finished.
  The Edit Playlist screen will disappear.

Advanced Editing (Play List)

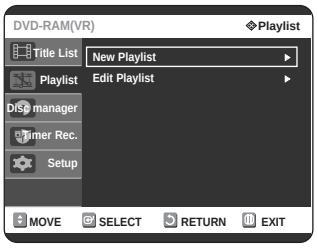
Creating a Playlist

Follow these instructions to create a new playlist entry from a recorded title.

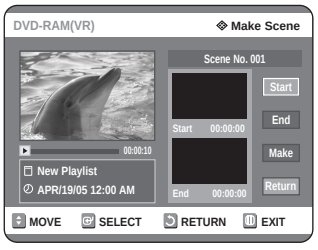
DVD-RAM DVD-RW (VR mode)

1 With the unit in Stop mode, press the MENU button on the remote control.

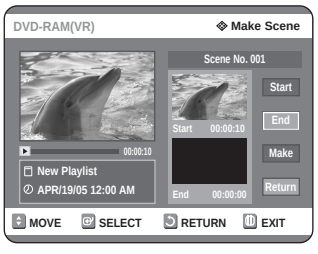
2 Press the ▲▼ buttons to select Playlist, and then press the ENTER or ▶ button.



3 Press the ▲▼ buttons to select New Playlist, and then press the ENTER or ▶ button.
The Make Scene screen is displayed.

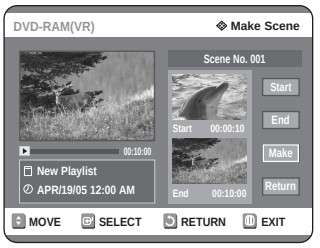


4 Press the ENTER button at the start point.



- The image and time at the start point are displayed on the Start window.
- The yellow-colored selection bar moves to the End item.
- Select the starting point of the section from which you want to create a new scene using the playback related buttons (, , , ,).

5 Press the ENTER button at the end point.



- The image and end point time are displayed in the End window.
- The yellow-colored selection bar moves to the Make item.

- To make a new playlist -

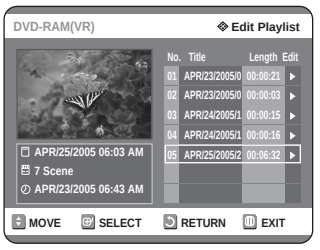
6 Press the ▲▼ buttons to select Make, and then press the ENTER button.
A new Scene will be added to the current Playlist.
A new Make Scene screen is displayed.
Repeat the above steps to create further scenes.

NOTE

- If you want to make a new playlist, go to MENU → new playlist.
- You can check and see all the scenes on Edit Playlist screen.

- To return to Edit Playlist menu -

7 Press the ▲▼ buttons to select Return, and then press the ENTER button.
The Edit Playlist screen is displayed.



NOTE

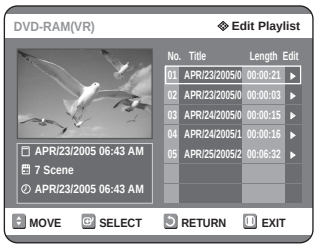
- You can create up to 99 playlist entries.
- Depending on the kind of disc, the displayed screen may have a slight difference.
- Press the MENU or PLAY LIST button after the operation has finished.
The Edit Playlist screen will disappear.

Playing Entries in the Playlist

Follow these instructions to play the playlist entries.

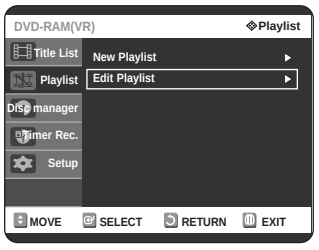
DVD-RAM DVD-RW (VR mode)

1 **With the unit in stop mode, press the PLAY LIST button.**
The Edit Playlist screen is displayed.



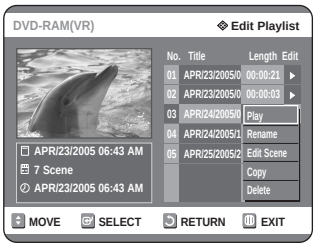
Using the MENU button

- Press the MENU button in the stop mode.
- Press the ▲▼ buttons to select Playlist, and then press the ENTER or ▶ button.
- Press the ▲▼ buttons to select Edit Playlist, and then press the ENTER or ▶ button.

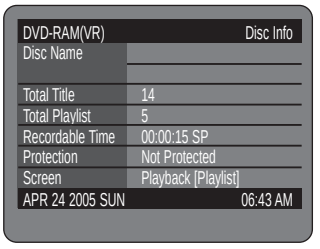


2 **Press the ▲▼ buttons to select the title you want to edit from the Playlist, and then press the ENTER or ▶ button.**
The Edit Playlist menu is displayed : Play, Rename, Edit Scene, Copy, Delete.

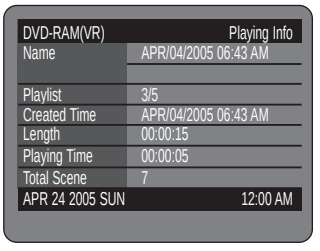
3 **Press the ▲▼ buttons to select Play, and then select the ENTER button.**
The playlist entries will be played.



- To view the current status of the disc and progress of playback : Press the INFO button, and the information about the disc will appear.



- Press the INFO button once again. Then you can check the information about the playlist currently playing back.



- The screen returns to the Edit Playlist screen when the playback has finished.

4 **Press the STOP button to stop playing.**
The screen returns to the Edit Playlist screen.

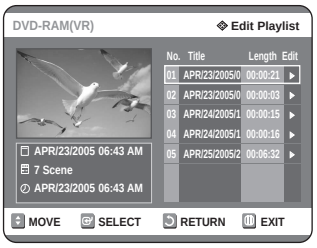
Editing

Renaming a Playlist Entry

Follow these instructions to rename a playlist entry, i.e. to edit the title of a playlist entry.

DVD-RAM DVD-RW (VR mode)

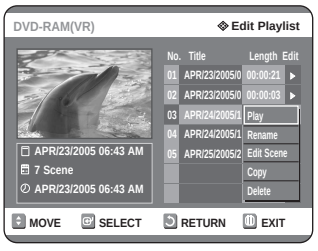
1 **With the unit in stop mode, press the PLAY LIST button.**
The Edit Playlist screen is displayed.



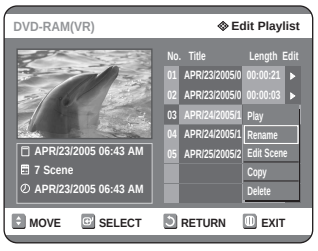
Using the MENU button

- Press the MENU button in the stop mode.
- Press the ▲▼ buttons to select Playlist, and then press the ENTER or ▶ button.
- Press the ▲▼ buttons to select Edit Playlist, and then press the ENTER or ▶ button.

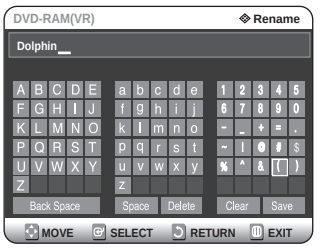
2 **Press the ▲▼ buttons to select the title you want to edit from the Playlist, and then press the ENTER or ▶ button.**
The Edit Playlist menu is displayed :Play, Rename, Edit Scene, Copy, Delete



3 **Press the ▲▼ buttons to select Rename, and then press the ENTER button.**

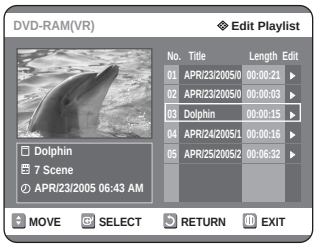


4 **Enter the desired characters using the ▲▼◀▶ buttons.**


DVD-RAM(VR)
Rename
Dolphin
A B C D E F G H I J K L M N O P Q R S T U V W X Y Z
a b c d e f g h i j k l m n o p q r s t u v w x y z
1 2 3 4 5 6 7 8 9 0
Back Space
Space
Delete
Clear
Save
MOVE SELECT RETURN EXIT

- This function is the same as the Rename function in renaming the title list. (See page 73.)
- The maximum number of characters that can be entered is 31. All 31 characters can be displayed by pressing the INFO button.

5 **Press the ▲▼◀▶ buttons to select Save, and then press the ENTER button.**
The changed title is displayed in the title field of the selected playlist entry.

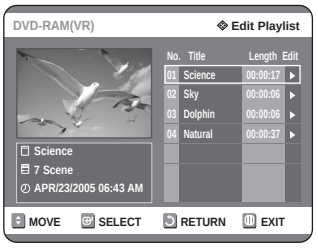


Editing a Scene for the Playlist

Follow these instructions to edit scenes for a playlist.

DVD-RAM DVD-RW (VR mode)

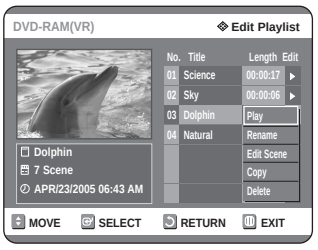
1 **With the unit in stop mode, press the PLAY LIST button.**
The Edit Playlist screen is displayed.



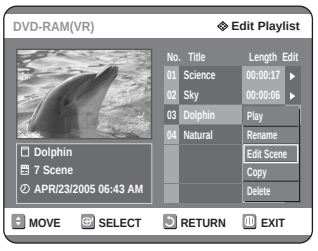
Using the MENU button

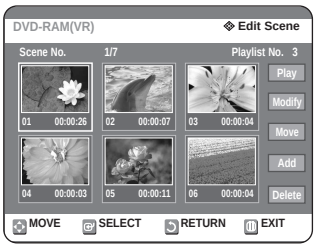
- Press the MENU button in the stop mode.
- Press the ▲▼ buttons to select Playlist, and then press the ENTER or ▶ button.
- Press the ▲▼ buttons to select Edit Playlist, and then press the ENTER or ▶ button.

2 **Press the ▲▼ buttons to select the title you want to edit from the Playlist, and then press the ENTER or ▶ button.**
The Edit Playlist menu is displayed:Play, Rename, Edit Scene, Copy, Delete



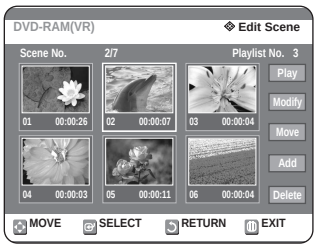
3 **Press the ▲▼ buttons to select Edit Scene, and then press the ENTER button.**
The Edit Scene screen is displayed.



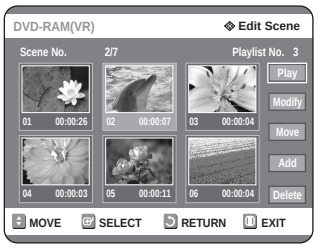


Playing a Selected Scene

4 **Press the ▲▼◄► buttons to select the scene you want to play, and then press the ENTER button.**
The playlist entry to be played is selected.



5 **Press the ENTER button.**
The selected scene is played.



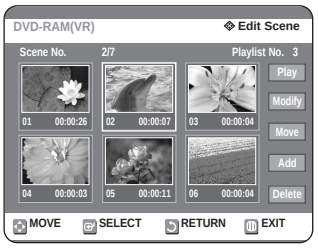
- To stop scene play, press the STOP button.

Editing

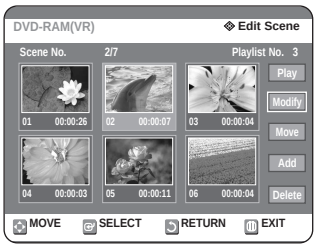
Modifying a Scene (Replacing a Scene)

To setup, follow the steps 1 to 3 in page 80.

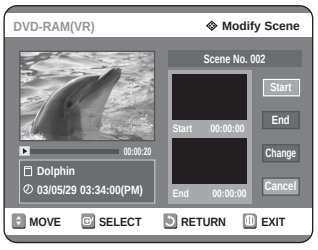
4 Press the ▲▼◄► buttons to select the scene you want to modify, and then press the ENTER button.



5 Press the ▲▼ buttons to select Modify, and then press the ENTER button.

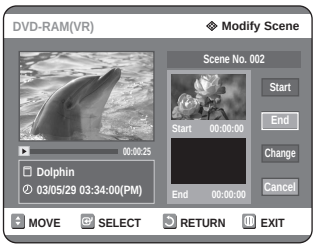


6 Press the ENTER button at the start point of the scene.



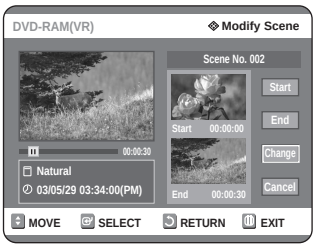
- The image and starting point time are displayed on the Start window.
- Select the starting or ending point of the section you want to modify using the playback related buttons (, , , ,).

7 Press the ENTER button at the end point of the scene.

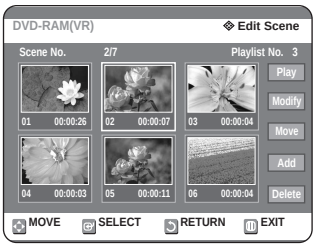


- The image and ending point time are displayed in the End window.

8 Press the ▲▼ buttons to select Change, and then press the ENTER button.



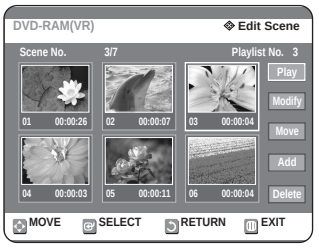
- The scene you want to modify is changed with the selected section.



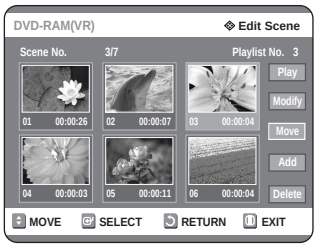
Moving a Scene (Changing the Position of a Scene)

To setup, follow the steps 1 to 3 in page 80.

4 Press the ▲▼◄► buttons to select the scene you want to move (change the position), and then press the ENTER button.

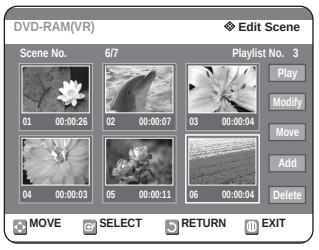


5 Press the ▲▼ buttons to select Move, then press the ENTER button.

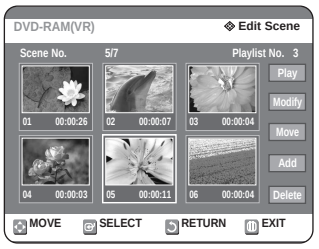


- A yellow selection window is displayed on the scene to be moved.

6 Press the ▲▼◄► buttons to select the position to which you want to move the selected scene, and then select the ENTER button.



- The selected scene is moved to the selected position.



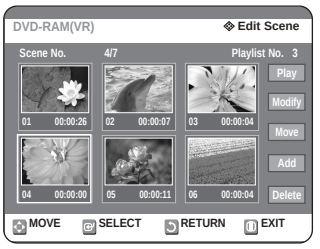
NOTE

- Depending on the kind of disc, the displayed screen may have a slight difference.

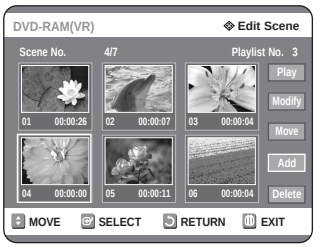
Adding a Scene

To setup, follow the steps 1 to 3 in page 80.

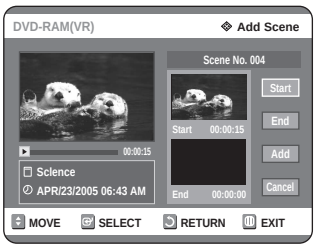
4 Press the ▲▼◄► buttons to select the scene that will have a new scene inserted before it, and then press the ENTER button.
A yellow selection window is displayed on the scene to be added as the new scene.



5 Press the ▲▼ buttons to select Add, then press the ENTER button.

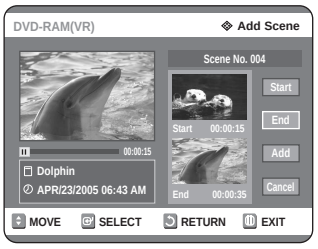


6 Press the ENTER button at the starting point of the scene.



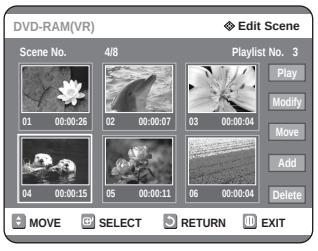
- The image and starting point time are displayed in the Start window.
- Select the end point of the section where you want to add the new scene using the playback related buttons (, , , ,).

7 Press the ENTER button at the end point of the scene.



- The image and time of the end point are displayed in the End window.
- To cancel, press the ▲▼ buttons to select cancel and then press the ENTER button.

8 Press the ▲▼ buttons to select Add, and then press the ENTER button.

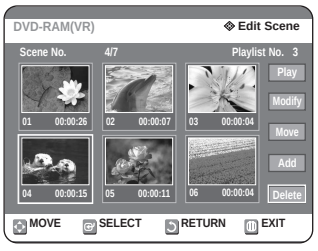


- The section you want to add is inserted prior to the scene selected in step 4.

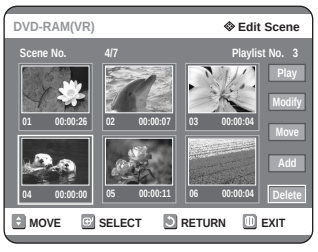
Deleting a Scene

To setup, follow the steps 1 to 3 in page 80.

4 Press the ▲▼ ◄► buttons to select the scene you want to delete, and then press the ENTER button.



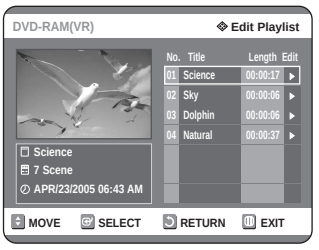
5 Press the ▲▼ buttons to select Delete, and then press the ENTER button.



Copying a Playlist Entry to the Playlist

Using the PLAY LIST button

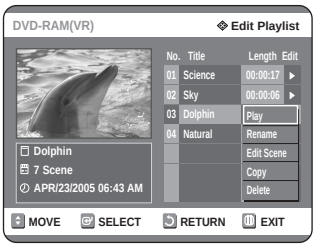
1 Press the PLAY LIST button.
The Edit Playlist screen is displayed.



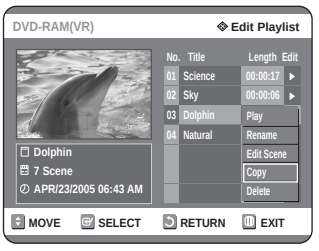
Using the MENU button

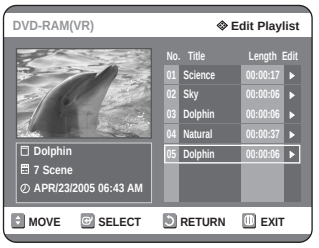
- Press the MENU button in the stop mode.
- Press the ▲▼ buttons to select Playlist, and then press the ENTER or ► button.
- Press the ▲▼ buttons to select Edit Playlist, and then press the ENTER or ► button.

2 Press the ▲▼ buttons to select the title you want to copy to the Playlist, and then press the ENTER or ► button.
The Edit Playlist menu is displayed:Play, Rename, Edit Scene, Copy, Delete



3 Press the ▲▼ buttons to select Copy, and then press the ENTER button.
Playlist that has been selected will be copied.





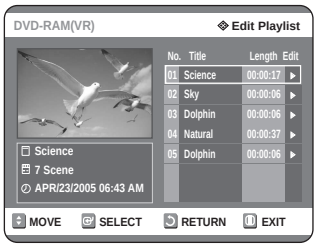
NOTE

- The playlist can contain up to 99 playlist entries (titles).
- Press the MENU button after the operation has finished.
  The Edit Playlist screen will disappear.

Deleting a Playlist Entry from the Playlist

Using the PLAYLIST button

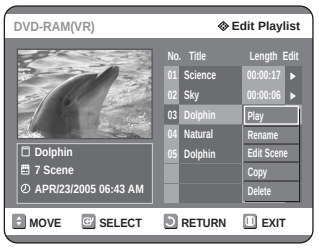
1 With the unit in stop mode, press the PLAY LIST button.
The Edit Playlist screen is displayed.



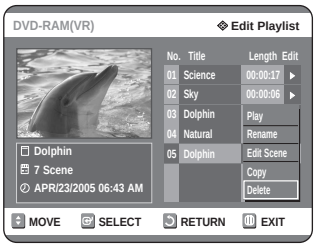
Using the MENU button

- Press the MENU button in the stop mode.
- Press the ▲▼ buttons to select Playlist, and then press the ENTER or ▶ button.
- Press the ▲▼ buttons to select Edit Playlist, and then press the ENTER or ▶ button.

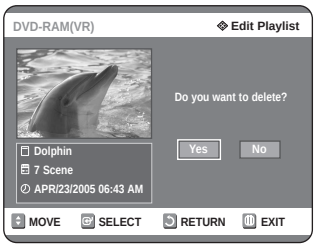
2 Press the ▲▼ buttons to select the title you want to edit from the Playlist, and then press the ENTER or ▶ button.
The Edit Playlist menu is displayed:Play, Rename, Edit Scene, Copy, Delete



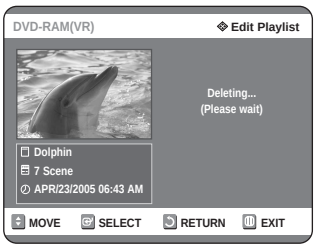
3 Press the ▲▼ buttons to select Delete, and then press the ENTER button.

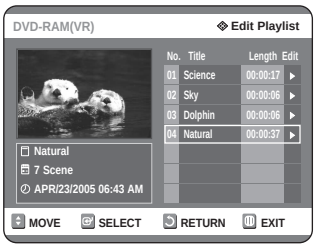


- You will be prompted with the delete confirmation message 'Do you want to delete?'.



4 Press the ◀▶ buttons to select Yes, and then press the ENTER button.
You automatically returned to the Edit Playlist screen after the delete operation has finished.





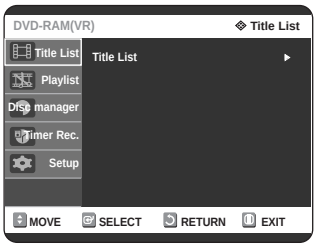
Disc Manager

Editing the Disc Name

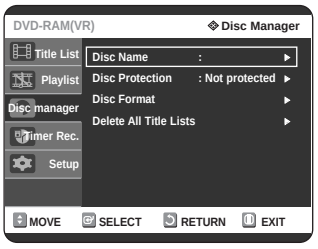
Follow these instructions to give a name to a disc.

DVD-RAM DVD-RW DVD-R

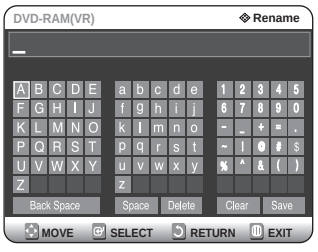
1 With the unit in Stop mode, press the MENU button on the remote control.



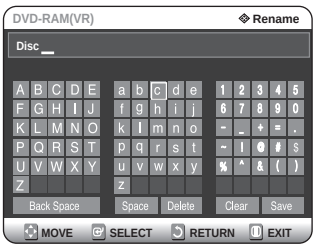
2 Press the ▲▼ buttons to select Disc Manager, then press the ENTER or ▶ button.



3 Press the ▲▼ buttons to select Disc Name, then press the ENTER or ▶ button.
The Rename screen is displayed.

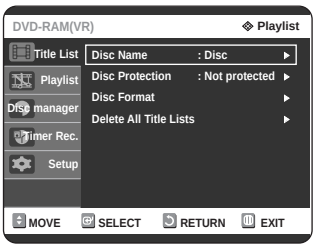


4 Enter the desired characters using the ▲▼◄ ► buttons.



- This function is the same as the Rename function in renaming the title list. (See page 73.)
- The maximum number of characters that can be entered is 31. All 31 characters can be displayed by pressing the INFO button.

5 Press the ▲▼◄► buttons to select Save and then press the ENTER button.
A disc name is given to the disc.



NOTE

- You may need to clear disc protect before beginning editing.(see page 86.)
- Depending on the kind of disc, the displayed screen may be different.

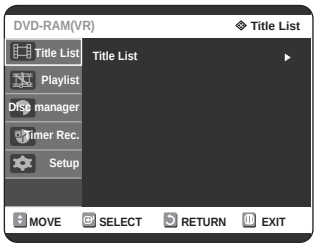
Editing

Disc Protection

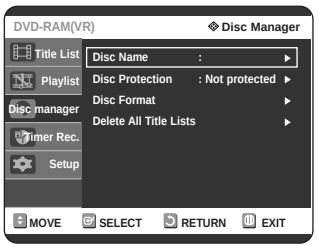
Disc Protect allows you to protect your discs from being formatted or deleted due to unintended operations.

DVD-RAM DVD-RW DVD-R

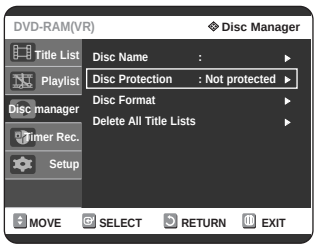
1 With the unit in Stop mode, press the MENU button on the remote control.



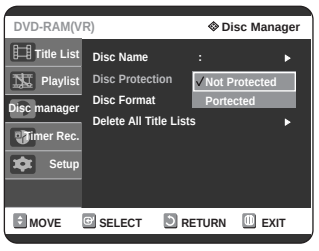
2 Press the ▲▼ buttons to select Disc Manager, and then press the ENTER or ▶ button.

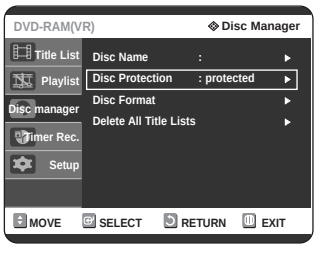


3 Press the ▲▼ buttons to select Disc Protection, then press the ENTER or ▶ button.



4 Press the ▲▼ button to select Protected, then press the ENTER button.



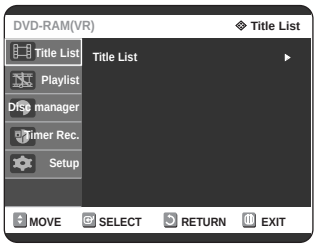


Formatting a Disc

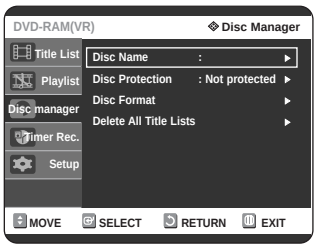
Use these instructions to format a disc.
The disc protect should be cleared.

DVD-RAM DVD-RW

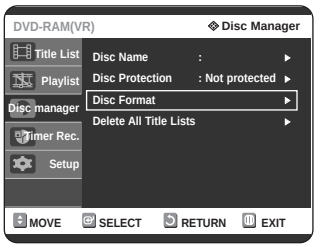
1 With the unit in Stop mode, press the MENU button on the remote control.



2 Press the ▲▼ buttons to select Disc Manager, and then press the ENTER or ▶ button.

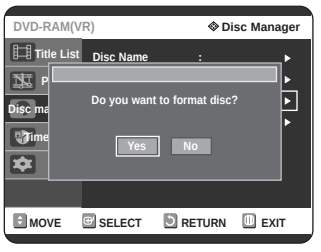


3 Press the ▲▼ buttons to select Disc Format, and then press the ENTER or ▶ button.



DVD-RAM

- You will be prompted with the confirmation message 'Do you want to format disc?'.

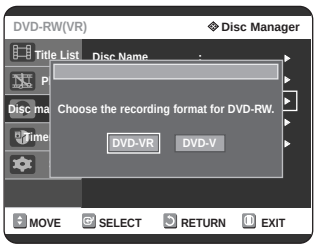


- You will be prompted with the confirmation message 'All data will be deleted. Do you want to continue?'.

Editing

DVD-RW

- You will be prompted with the confirmation message 'Choose the recording format for DVD- RW.'



4 Press the ◄► buttons to select Yes, and then press the ENTER button.
The disc is formatted.

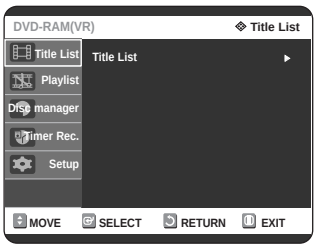
DVD-VR and DVD-V are defined according to their recording format.

	DVD-VR	DVD-V
DISC	DVD-RAM DVD-RW	DVD-RW DVD-R

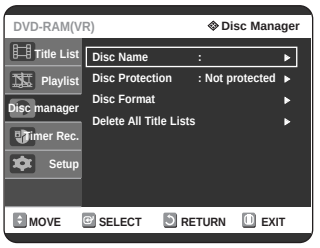
Delete All Title Lists

DVD-RAM DVD-RW DVD-R

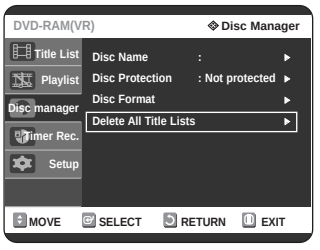
1 With the unit in Stop mode, press the MENU button on the remote control.



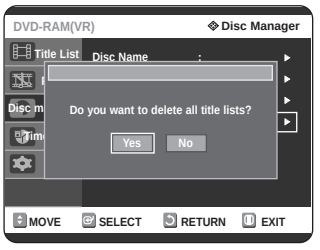
2 Press the ▲▼ buttons to select Disc Manager, and then press the ENTER or ► button.



3 Press the ▲▼ button to select Delete All Title Lists, and then press the ENTER or ► button.



- You will be prompted with the confirmation message 'Do you want to delete all title lists?'.



- When Protected Entry exists: The Delete All Title List function will not operate. If there is a title containing a still picture, however, that function will not operate. If you want to delete a protected entry, disable Protect for it on the Lock item.

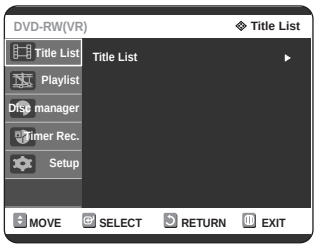
4 Press the ◄► buttons to select Yes, and then press the ENTER button.
All title lists are deleted.

Finalizing a disc

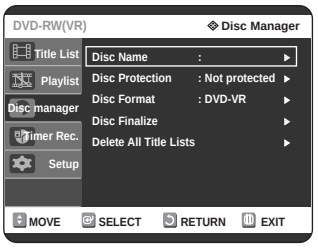
After you record titles onto a DVD-RW/DVD-R disc with your DVD recorder, it needs to be finalized before it can be played back on external devices.

DVD-RW DVD-R

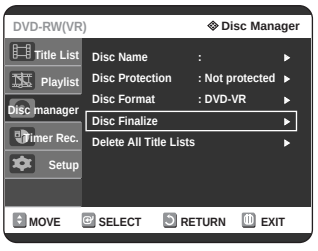
1 With the unit in Stop mode, press the MENU button on the remote control.

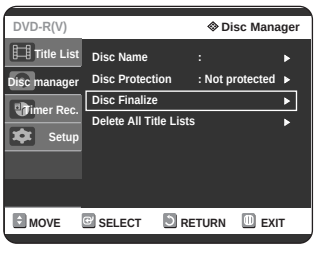


2 Press the ▲▼ buttons to select Disc Manager, and then press the ENTER or ► button.

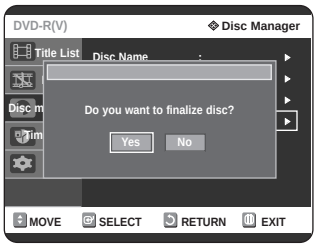


3 Press the ▲▼ button to select Disc Finalize, and then press the ENTER or ► button.

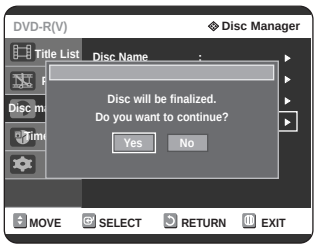




You will be prompted with the message 'Do you want to finalize disc?'



If you select Yes, you will be prompted again with the message ' Disc will be finalized. Do you want to continue?'



4 Press the ◄► buttons to select Yes, and then press the ENTER button.
The disc is finalized.

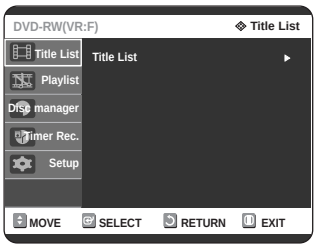
NOTE

- Once a disc is finalized, you cannot delete entries from the record list.
- After being finalized, the DVD-R/DVD-RW(video mode) operates in the same manner as a DVD-Video.
- Depending on the kind of disc, the displayed screen may have a slight difference.
- Finalizing time may be different depending on the amount of data recorded on the disc.
- Data on the disc will be damaged if the recorder is powered off during finalize process.

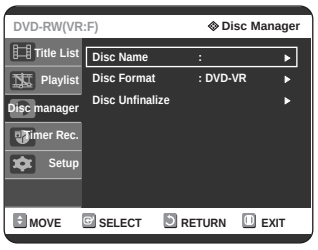
Unfinalizing a disc (V/VR mode)

DVD-RW

1 With the unit in Stop mode, press the MENU button on the remote control.



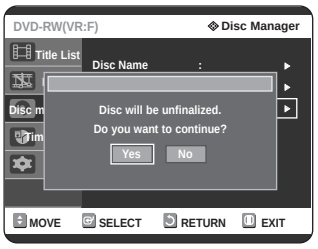
2 Press the ▲▼ buttons to select Disc Manager, and then press the ENTER or ► button.



3 Press the ▲▼ button to select Disc Unfinalize, and then press the ENTER or ► button.

You will be prompted with the message 'Do you want to unfinalize disc?'.

If you select Yes, you will be prompted again with the message ' Disc will be unfinalized. Do you want to continue?'



4 Press the ◄► buttons to select Yes, and then press the ENTER button.

The disc is unfinalized.

NOTE

- A DVD-RW can be finalized or unfinalized in Video mode.

	Finalize	Unfinalize
Mark	DVD-Video(RW)	DVD-RW(V)
Operation	Same as DVD-Video	Additional recording, protection and deletion are possible.

- A DVD-RW can be finalized or unfinalized in VR mode.

	Finalize	Unfinalize
Mark	DVD-RW(VR:F)	DVD-RW(VR)
Operation	Additional recording, deletion, editing, and protection are impossible.	Additional recording, deletion, editing, and protection are possible.

Additional Information

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Troubleshooting

If your product malfunctions, go through the check-points below before contacting a Samsung authorized service center.

Power

The input is displayed for a while when the power is turned on.

Checkpoint 1 The DVD recorder requires some time to initialize and the input will be displayed for approx. 10 seconds after it is turned on.

Recording

Cannot record TV programs.

Checkpoint 1 Check whether the power cord is securely plugged into the power outlet.

Checkpoint 2 Did you set the DVD recorder channel settings correctly?

Checkpoint 3 Check the free space on your DVD-RAM/DVD-RW/DVD-R discs.

I pressed the REC button but there is no response.

Checkpoint 1 Recording is possible for DVD-RAM/DVD-RW/DVD-R discs only. If a program is copy protected, it cannot be recorded.

Playback

Cannot play the disc.

Checkpoint 1 Check whether the disc is inserted correctly with the label facing up.

Checkpoint 2 Check the regional code of the DVD disc.

Checkpoint 3 This DVD recorder cannot play some types of discs. (See page 5.)

⃠ icon appears on the screen.

Checkpoint 1 You cannot use this operation or function due to one of the following reasons:
(1) Your DVD disc restricts it.
(2) Your DVD disc does not support this feature (for example: angles)
(3) The feature is not available at the moment.
(4) You've requested a title, chapter, or scan time that is out of range.

Play mode settings are different from the settings configured in the Settings menu.

Checkpoint 1 The disc does not support all selected functions. In this case, some settings configured in the settings menu may not work properly.

Cannot change the aspect ratio.

Checkpoint 1 The aspect ratio is fixed for DVD discs. (See page 35.)

The angle operation does not work while playing a DVD disc.

Checkpoint 1 The angle operation is available only when the disc contains images captured from different angles.

The selected audio and/or subtitle language is not played.

Checkpoint 1 Audio and subtitle languages are disc-specific. Only the sound and subtitle languages contained on the DVD disc are available and displayed in the disc menu.

Video

The disc revolves, but no image or bad quality images are displayed.

Checkpoint 1 Check whether there is damage to or any foreign material on your disc.

Checkpoint 2 Some low quality discs may not play properly.

Checkpoint 3 If scenes change from dark to bright suddenly, the screen may shake vertically temporarily, but this is not a fault.

Sound

No sound.

Checkpoint 1 Are you watching a program in slow or skip mode?
If you are playing a program at a speed other than normal speed, sound will not be heard.

Checkpoint 2 Check the connections and settings.

Checkpoint 3 Check whether the disc is damaged. Clean the disc, if necessary.

Checkpoint 4 Check whether the disc is inserted correctly with the label facing up.

No audio output.

Checkpoint 1 Check whether you have selected the correct digital output options in the Audio Output Options menu.
(See page 33.)

Timer Recording

Timer lamp flickers.

Checkpoint 1 Check there is enough space in the disc for recording.

Checkpoint 2 Check whether the current disc is recordable or not.
Make sure to check before the start time of recording.

Timer recording does not work properly.

Checkpoint 1 Re-check the recording time and the end time settings again.

Checkpoint 2 Recording will be cancelled, if the power is disconnected due to a power failure or another similar reason while recording.

Remote Control Unit

The remote control doesn't work.

Checkpoint 1 Point the remote control at the remote control sensor on your DVD recorder. Allow for proper distance. Remove obstacles between your DVD recorder and the remote control.

Checkpoint 2 Check whether the batteries are empty.

Checkpoint 3 Check for the DVD/TV selection button.

Other

I forget my password for parental supervision.

Checkpoint 1 Press the (⏯) and (⏹) buttons on your DVD recorder simultaneously when the power is on. All settings including the password will revert to the factory settings. Do not use this unless absolutely necessary.
(Note that this function is possible only when no disc is inserted.)

Is it possible to change a subtitle and an audio signal on a recorded disc?

Checkpoint 1 A recorded disc is played with only the subtitle and the audio signal which were selected during recording.

Other problems

Checkpoint 1 Read the table of contents and then find and read the section describing your problem, and follow the instructions given.

Checkpoint 2 Turn your DVD recorder off and on.

Checkpoint 3 If the problem still persists, contact a nearby Samsung service center.

Problems and Solutions [Display error Message]

Before contacting a Samsung authorized service center, perform the following simple checks.

Problem	Explanation / Solution
You cannot record a copy protected movie.	◆ You can't record the video since it is protected by copyright.
You cannot record. This disc is protected.	◆ Disc you are using is protected. To record on this disc or use this function, cancel the disc protection function. Refer to page 86.
This disc cannot be formatted (the disc is protected).	
This disc cannot be renamed (the disc is protected).	
The disc cannot be finalized (the disc is protected).	
This [Menu] is not available (the disc is protected).	
The disc cannot be played, Please check the regional code of the disc.	◆ The disc does not match the regional code for your area and cannot be played on this device.
This disc cannot be formatted. Please check the disc.	◆ Make sure there are no scratches or dirt on the disc.
You could not format the disc because of error detection.	
You could not finalize the disc because of error detection.	
You could not unfinalize the disc because of error detection.	
The disc cannot be played, Please check the TV system.	◆ The disc is PAL format and cannot be played on this unit.
The disc can be neither played nor recorded.	◆ Make sure there are no scratches or dirt on the disc.
The disc cannot be played, Please check the disc.	
If the disc has invalid information, no more titles can be recorded. Please format the disc beforehand.	◆ You can't use the disc because it contains errors from previous recordings. Use the disc after formatting.

Problems and Solutions [Display error Message]

Problem	Explanation / Solution
Error is detected on the disc.	◆ You can't use the disc because it contains errors from previous recordings. Use the disc after formatting.
System error is found. Please try it again after turning off the power.	◆ When operating, errors happen. Turn off the device. (To turn off, press and hold the power button on the front of the device for 10 seconds.) After turning off, press the Open button and remove the disc from the device.
The DV device is not connected.	◆ Make sure the DV device is connected properly to the DV connection Jack. If it is connected properly, turn it off and on once again.

If you are unable to solve the problem after reading the above instructions, note:

- ◆ The model and serial number on the rear of your DVD Recorder
- ◆ The warranty information
- ◆ A clear description of the problem

Then contact your nearest SAMSUNG authorized service center. Call 1-800-SAMSUNG for a center near you.

Specifications

General	Power requirements	120V AC, 60Hz
	Power consumption	35 Watts
	Weight	8.27 lb
	Dimensions	16.9in(W) x 9.6in(D) x 2.3in(H)
	Operating temp.	+41°F to +95°F
	Other conditions	Keep level when operating. Less than 75% operating humidity
Input	Video (1,2)	1.0 V p-p at 75Ω load, sync negative
		S-Video input (Y: 1.0Vp-p, C: 0.286Vp-p at 75Ω load)
	Audio(1,2)	Max.Audio Input Level : 2Vrms
	DV Input	IEEE 1394(4p) compatible jack
	Receivable Channels	Regular TV broadcasting: VHF (2~13), UHF (14~69)
		Cable TV broadcasting: 1~125
Output	Audio	Analog output jacks 1, 2
		Optical/Coaxial digital audio output
		Full scale Analog output level : 2Vrms
	Video	Video output jack 1
		S-Video output 1 (Y:1.0Vp-p, C:0.286Vp-p at 75Ω load)
		Component output 1 (Y: 1.0Vp-p, Pb: 0.70Vp-p, Pr: 0.70Vp-p at 75Ω load)
Recording	Picture Compression format	MPEG-II
	Audio Compression format	Dolby Digital 2ch/256kbps
	Recording Quality	XP (about 8 Mbps), SP (about 4 Mbps), LP (about 2 Mbps), EP (about 1.2 Mbps or about 0.8 Mbps)
	Audio Frequency Response	20 Hz ~ 20 kHz

Audio Output For DVD discs, audio signals recorded at 96kHz sampling frequency are converted and output at 48kHz.

Disc Type	DVD	AUDIO CD(CDDA)
Analog Audio Output	48 / 96kHz	44.1kHz
Digital Audio Output	48kHz	44.1kHz

Warranty

LIMITED WARRANTY TO ORIGINAL PURCHASER

This SAMSUNG brand product, as supplied and distributed by SAMSUNG ELECTRONICS AMERICA, INC. (SAMSUNG) and delivered new, in the original carton to the original consumer purchaser, is warranted by SAMSUNG against manufacturing defects in materials and workmanship for the following limited warranty period:

One (1) Year Parts / Ninety Days (90) Labor

This limited warranty begins on the original date of purchase, and is valid only on products purchased and used in the United States, and does not include transportation, installation, removal or reinstallation. Warranty repairs must be performed by SAMSUNG's authorized service center. To receive warranty service, the original dated bill of sale must be presented upon request as proof of purchase to SAMSUNG or SAMSUNG's authorized service center. Transportation to and from the service center is the responsibility of the purchaser.

SAMSUNG will repair or replace this product, at our option and at no charge with new or reconditioned parts, if found to be defective during the limited warranty period specified above. The product must be returned during the warranty period with transportation charges prepaid to SAMSUNG's designated service center. Prior to returning any product for warranty service, the purchaser must contact SAMSUNG for problem determination and service procedures. SAMSUNG does not warrant uninterrupted or error-free operation of the product.
All replaced parts and products become the property of SAMSUNG and must be returned to SAMSUNG. Replacement parts and products assume the remaining original warranty, or ninety (90) days, whichever is longer.

This limited warranty covers manufacturing defects in materials and workmanship encountered in normal, noncommercial use of this product and shall not apply to the following, including, but not limited to: damage which occurs in shipment; applications and uses for which this product was not intended; failures or problems which are caused by products or equipment not supplied by SAMSUNG; accidents, misuse, abuse, neglect, misapplication, fire, water, lightning or other acts of nature; incorrect electrical line voltage, fluctuations or surges; damage caused by improper or faulty installation; improper connection with any peripheral; product alteration or modification; improper or unauthorized repair; cosmetic damage or exterior finish; product with altered serial numbers; failure to follow operating instructions, customer adjustments, maintenance and environmental instructions that are covered and prescribed in the instruction book; use of non-SAMSUNG or unauthorized parts, supplies, accessories or equipment which damage this product or result in service problems; failures or problems due to incompatibility with other equipment.

Contact SAMSUNG WORLD WIDE

If you have any questions or comments relating to Samsung products,
please contact the SAMSUNG customer care centre.

☎ 1-800-SAMSUNG (7267864) / www.samsung.com

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